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OF  
OCEANOGRAPHIC OBSERVATIONS

海 洋 調 査 年 報

VOLUME 14

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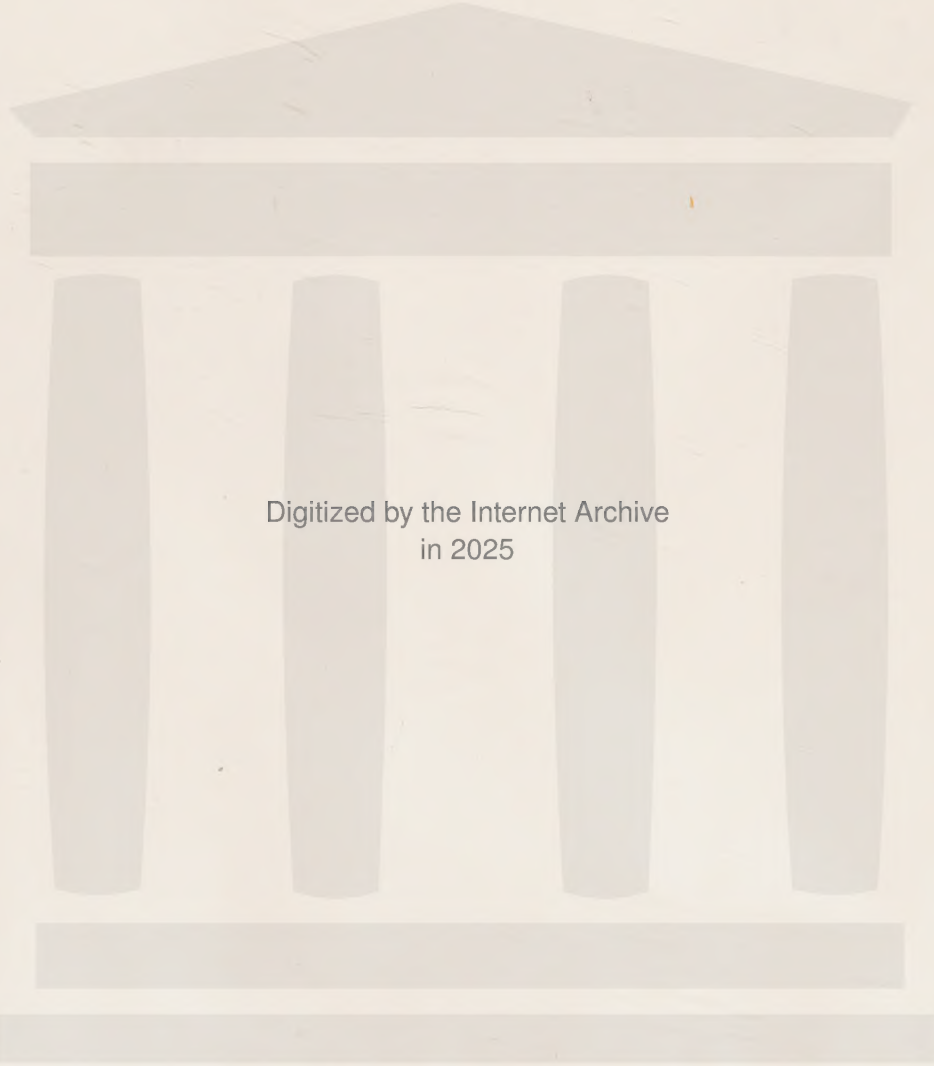
國 立 水 產 振 興 院

Fisheries Research and Development Agency

The Government of the Republic of Korea

Pusan, Korea

May, 1967



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## 범례

時刻 : 大韓民國의 標準時이며 東經 135° 의 子午線을 基準으로한 平均太陽時임.

水溫 : 攝氏度數 (°C) 이며 示度는 百分之壹까지 表示하였음.

鹽分 : 電氣傳導度 鹽分計로 測定하고 千分率 (‰) 로 表示됨.

酸素 : 水中溶存酸素量을 Winkler 氏 方法에 依하여 測定하고 1 氣壓 0°C 에서의 cc/L 로 表示됨.

pH : Fisher Accumet pH-meter 로 測定하였음.

磷酸鹽 : 分光光度計 SP-600 또는 光電比色計 東京 光電式 7A型 으로써 G. Deniges 方法에 依하여 測定하고  $\mu\text{g-at/L}$  로 表示됨.

水深 : Meter 法에 依하여 表示됨.

水色 : Forel 水色標準液의 水色番號 (1—11) 임.

透明度 : 透明度板에 依한 測定值로써 Meter 法으로 表示됨.

波浪 : 10 階級法 (0~9) 에 依하여 目測 한것임.

潮水 : 4階級法 (0~3) 에 依하여 目測한것이며 波高는 0:0m, 1:2m 未滿, 2:2~4m, 3:4m 以上임.

氣溫 : 攝氏度數 (°C) 이며 示度는 拾分之壹임.

氣壓 : Aneroid 氣壓計에 依한 觀測值이며 mm로 表示됨.

風向 : 風向은 16方位法 (磁針方位) 에 依함.

風力 : 風力은 Beaufort 風力階級法에 依하여 目測한것임.

雲形 : 雲形은 10 種 雲形法에 依함.

雲量 : 雲量은 天空의 10 等分法에 依하여 目測한것임.

天氣 : 天氣는 快晴 (B): 雲量 0~2, 晴 (BC): 雲量 3~7, 雲 (C): 雲量 8~10, 雨 (R), 霧 (F), 雪 (S) 등으로 區分하여 表示됨.



## EXPLANATIONS

|                      |                                                                                                                                                           |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time                 | : Korean Standard Time used the mean solar time referred to the meridian of 135° E.                                                                       |
| Water temperature    | : Recorded in hundredths of a degree in Centigrade.                                                                                                       |
| Salinity             | : Expressed in parts per thousandth, and measured by the Inductively Coupled Salinometer Model 601 MK III.                                                |
| Oxygen               | : Concentration of dissolved oxygen in volume per liter (cc/L) at 0°C and 760 mm Hg.                                                                      |
| pH                   | : Negative logarithm of the hydrogen ion concentration measured by the Fisher Accumet pH-meter.                                                           |
| PO <sub>4</sub> -P   | : Concentration of dissolved inorganic phosphorus-phosphate in microgram atoms per liter (μg at/L) determined by the G. Deniges method.                   |
| Depth                | : Expressed in meters determined by the wire length and its angle or an interpolated value obtained.                                                      |
| Color of the sea     | : Recorded in numbers of Forel Scale (1~11).                                                                                                              |
| Transparency         | : Expressed in meters determined by the Secchi disk.                                                                                                      |
| Wind wave            | : Expressed in the Scale (0~9)                                                                                                                            |
| Swell                | : Expressed in the Scale (0~3). The numbers of the scale and the wave height are as follows. 0 : 0 m, 1 : less than 2 m, 2 : 2~4 m, 3 : greater than 4 m. |
| Air temperature      | : Recorded in tenths of a degree in Centigrade.                                                                                                           |
| Atmospheric pressure | : Recorded in millimeter obtained from the direct reading of Aneroid Barometers.                                                                          |
| Wind direction       | : Given in 16 point scale of the Compass bearing.                                                                                                         |
| Wind velocity        | : Given in Beaufort Scale.                                                                                                                                |
| Cloud type           | : Recorded in ten types of the cloud.                                                                                                                     |
| Cloud Cover          | : Expressed in tenths of the whole sky covered.                                                                                                           |
| Weather              | : Recorded in present weather. The abbreviations and the cloud cover are as follows.<br>B : 0~2, BC : 3~7, C : 8~10, Rain : R, Fog : F, etc.              |



제 1 편

연안정지해양관측성적



PART 1

COASTAL OCEANOGRAPHIC OBSERVATIONS

1965



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# 연안정지 해양관측점 위치표

Position of the Shore stations

| 해역<br>Region       | 번호<br>No. | 관측지명<br>Name of the Station | 위치<br>Position |                 | 관측회수<br>Frequency of<br>Observations | 관측개시년월<br>Date of<br>Inauguration |
|--------------------|-----------|-----------------------------|----------------|-----------------|--------------------------------------|-----------------------------------|
|                    |           |                             | 북위<br>Lat. (N) | 동경<br>Long. (E) |                                      |                                   |
| 동해안<br>East Coast  | ①         | 주문진 Chumunjin               | 37°53'15"      | 128°50'00"      | 매일 Daily*                            | 1952. 8                           |
|                    | ②         | 울릉도 Ulneung-Do              | 37°29'00"      | 130°54'35"      | 매일 Daily*                            | 1931. 11                          |
|                    | ③         | 죽변 Chukbyonman              | 37°03'28"      | 129°26'00"      | 매일 Daily*                            | 1916. 7                           |
|                    | ④         | 포항 Pchang                   | 36°02'56"      | 129°26'10"      | 매일 Daily*                            | 1946. 7                           |
|                    | ⑤         | 장기갑 Changgigap              | 36°04'35"      | 129°34'30"      | 매일 Daily*                            | 1916. 7                           |
|                    | ⑥         | 울기 Ulgi                     | 35°29'28"      | 129°26'50"      | 매일 Daily*                            | 1939. 1                           |
| 남해안<br>South Coast | ⑦         | 부산 Pusan                    | 35°05'03"      | 129°02'07"      | 매일 Daily*                            | 1925. 3                           |
|                    | ⑧         | 가덕도 Kadok-Do                | 34°59'20"      | 128°49'50"      | 매일 Daily*                            | 1930. 1                           |
|                    | ⑨         | 여수 Yosü                     | 34°44'00"      | 123°44'00"      | 매일 Daily*                            | 1921. 1                           |
|                    | ⑩         | 소리도 Sori-Do                 | 34°24'15"      | 127°48'15"      | 매일 Daily*                            | 1928. 4                           |
|                    | ⑪         | 거문도 Komun-Do                | 34°00'30"      | 127°19'15"      | 매일 Daily*                            | 1916. 7                           |
|                    | ⑫         | 사리도 Chaji-Do                | 34°05'20"      | 126°36'15"      | 매일 Daily*                            | 1923. 4                           |
|                    | ⑬         | 산지 Sanji                    | 33°31'10"      | 126°33'00"      | 매일 Daily*                            | 1923. 10                          |
|                    | ⑭         | 서귀포 Segwipo                 | 33°13'30"      | 126°34'45"      | 매일 Daily*                            | 1963. 1                           |
| 서해안<br>West Coast  | ⑮         | 마라도 Mara-Do                 | 33°06'45"      | 126°06'45"      | 매일 Daily*                            | 1923. 10                          |
|                    | ⑯         | 죽도 Chuk-Do                  | 34°13'30"      | 125°51'00"      | 매일 Daily*                            | 1916. 7                           |
|                    | ⑰         | 흑산도 Huksan-Do               | 34°05'30"      | 125°06'15"      | 매일 Daily*                            | 1925. 10                          |
|                    | ⑱         | 홍도 Hong-Do                  | 34°42'30"      | 125°13'00"      | 매일 Daily*                            | 1933. 1                           |
|                    | ㉀         | 목포 Mokpo                    | 34°46'40"      | 126°23'05"      | 매일 Daily*                            | 1928. 8                           |
|                    | ㉁         | 군산 Kunsan                   | 35°59'15"      | 126°43'00"      | 매일 Daily*                            | 1939. 4                           |
|                    | ㉂         | 어청도 Ochong-Do               | 36°06'40"      | 125°59'15"      | 매일 Daily*                            | 1916. 7                           |
|                    | ㉃         | 격렬비도 Kycgnyolbi-Do          | 36°37'15"      | 125°33'20"      | 매일 Daily*                            | 1916. 7                           |
|                    | ㉄         | 부도 Pu-Do                    | 37°08'40"      | 126°21'00"      | 매일 Daily*                            | 1926. 1                           |

\*-1시 21분 11초  
At 10 a.m. 21.11.11

# 연안정지 월별 표면수온

Surface Water Temperatures at the Shore Stations.

| 월<br>Month  | 관측지명<br>Station |       | ①<br>주 문 진<br>Chumun-jin | ②<br>울 능 도<br>Ulleung-do | ③<br>죽 변<br>Chuk-byon | ④<br>포 항<br>Pohang | ⑤<br>장 기 갑<br>Changgigap | ⑥<br>울 기<br>Ulgi | ⑦<br>부 산<br>Pusan |
|-------------|-----------------|-------|--------------------------|--------------------------|-----------------------|--------------------|--------------------------|------------------|-------------------|
|             | 순<br>Ten day    |       |                          |                          |                       |                    |                          |                  |                   |
| 1 월<br>Jan. | 상               | 순 1st | 9.31                     | 15.65                    | 11.40                 | 8.02               | 7.12                     | 11.50            | 10.67             |
|             | 중               | 순 2nd | 7.66                     | 13.83                    | 10.14                 | 6.72               | 7.56                     | 10.77            | 10.71             |
|             | 하               | 순 3rd | 6.79                     | 13.08                    | 9.90                  | 7.37               | 7.89                     | 12.90            | 11.14             |
|             | 월평균             | Mean  | 7.92                     | 14.19                    | 10.48                 | 7.37               | 7.52                     | 11.72            | 10.84             |
| 2 월<br>Feb. | 상               | 순 1st | 6.89                     | 11.37                    | 9.30                  | 6.33               | 7.67                     | 11.01            | 10.33             |
|             | 중               | 순 2nd | 6.06                     | 10.52                    | 9.30                  | 7.44               | 9.34                     | 11.42            | 11.29             |
|             | 하               | 순 3rd | 6.23                     | 10.26                    | 7.40                  | 6.50               | 8.20                     | 12.10            | 10.85             |
|             | 월평균             | Mean  | 6.39                     | 10.72                    | 8.66                  | 6.76               | 8.40                     | 11.50            | 10.82             |
| 3 월<br>Mar. | 상               | 순 1st | 6.39                     | 10.27                    | 8.70                  | 7.30               | 9.22                     | 12.50            | 11.10             |
|             | 중               | 순 2nd | 6.62                     | 10.27                    | 8.31                  | 8.22               | 9.57                     | 12.29            | 11.22             |
|             | 하               | 순 3rd | 7.15                     | 9.37                     | 8.14                  | 8.94               | 9.11                     | 12.30            | 11.68             |
|             | 월평균             | Mean  | 6.72                     | 9.97                     | 8.38                  | 8.15               | 9.30                     | 12.36            | 11.33             |
| 4 월<br>Apr. | 상               | 순 1st | 7.79                     | 9.26                     | 8.55                  | 10.27              | 9.78                     | 12.63            | 11.90             |
|             | 중               | 순 2nd | 8.73                     | 8.71                     | 9.83                  | 11.25              | 11.52                    | 13.40            | 12.20             |
|             | 하               | 순 3rd | 9.64                     | 9.05                     | 11.65                 | 13.04              | 12.50                    | 13.70            | 13.19             |
|             | 월평균             | Mean  | 8.72                     | 9.01                     | 10.01                 | 11.53              | 11.28                    | 12.91            | 12.43             |
| 5 월<br>May  | 상               | 순 1st | 10.73                    | 12.74                    | 11.17                 | 14.66              | 14.66                    | 14.73            | 14.32             |
|             | 중               | 순 2nd | 12.55                    | 14.07                    | 11.80                 | 16.18              | 18.39                    | 14.36            | 14.90             |
|             | 하               | 순 3rd | 13.59                    | 14.59                    | 12.74                 | 13.34              | 16.87                    | 14.75            | 15.83             |
|             | 월평균             | Mean  | 12.29                    | 13.80                    | 11.90                 | 14.72              | 16.64                    | 14.61            | 15.02             |
| 6 월<br>Jun. | 상               | 순 1st | 14.28                    | 16.09                    | 15.51                 | 17.63              | 21.60                    | 16.95            | 17.32             |
|             | 중               | 순 2nd | 16.97                    | 16.37                    | 16.80                 | 19.54              | 21.44                    | 18.52            | 18.76             |
|             | 하               | 순 3rd | 17.13                    | 18.07                    | 13.79                 | 16.00              | 23.09                    | 19.62            | 19.87             |
|             | 월평균             | Mean  | 16.13                    | 16.84                    | 15.37                 | 17.72              | 22.04                    | 18.36            | 18.65             |
| 7 월<br>Jul. | 상               | 순 1st | 18.94                    | 19.13                    | 14.32                 | 16.84              | 19.74                    | 16.95            | 18.90             |
|             | 중               | 순 2nd | 18.83                    | 19.12                    | 18.33                 | 20.10              | 20.40                    | 15.46            | 19.65             |
|             | 하               | 순 3rd | 19.41                    | 19.32                    | 18.70                 | 20.76              | 22.65                    | 18.77            | 20.59             |
|             | 월평균             | Mean  | 19.06                    | 19.19                    | 17.12                 | 19.23              | 20.93                    | 17.06            | 19.71             |
| 8 월<br>Aug. | 상               | 순 1st | 22.39                    | 20.27                    | 20.67                 | 21.38              | 24.13                    | 16.50            | 22.02             |
|             | 중               | 순 2nd | 21.54                    | 21.21                    | 21.00                 | 24.78              | 24.99                    | 20.44            | 20.49             |
|             | 하               | 순 3rd | 22.12                    | 22.75                    | 21.40                 | 24.38              | 23.79                    | 20.22            | 22.49             |
|             | 월평균             | Mean  | 22.02                    | 21.41                    | 21.02                 | 22.85              | 24.30                    | 19.05            | 21.67             |
| 9 월<br>Sep. | 상               | 순 1st | 22.75                    | 23.33                    | 21.00                 | 21.26              | 24.96                    | 19.00            | 20.66             |
|             | 중               | 순 2nd | 20.71                    | 22.47                    | 20.76                 | 21.35              | 23.21                    | 21.15            | 21.14             |
|             | 하               | 순 3rd | 20.80                    | 20.73                    | 20.61                 | 21.35              | 22.85                    | 21.43            | 21.81             |
|             | 월평균             | Mean  | 21.42                    | 22.18                    | 20.79                 | 21.32              | 23.67                    | 20.53            | 21.23             |
| 10월<br>Oct. | 상               | 순 1st | 19.39                    | 20.11                    | 20.53                 | 20.73              | 22.94                    | 21.08            | 20.83             |
|             | 중               | 순 2nd | 17.47                    | 19.23                    | 17.21                 | 17.63              | 18.27                    | 19.31            | 18.65             |
|             | 하               | 순 3rd | 19.39                    | 18.75                    | 16.22                 | 16.16              | 13.35                    | 18.27            | 18.10             |
|             | 월평균             | Mean  | 17.75                    | 19.36                    | 17.93                 | 18.43              | 18.19                    | 19.55            | 19.19             |
| 11월<br>Nov. | 상               | 순 1st | 15.12                    | 17.51                    | 14.92                 | 15.37              | 12.53                    | 17.56            | 18.89             |
|             | 중               | 순 2nd | 14.02                    | 16.37                    | 13.05                 | 13.93              | 12.67                    | 17.05            | 16.79             |
|             | 하               | 순 3rd | 12.08                    | 15.18                    | 12.26                 | 11.59              | 10.78                    | 16.60            | 14.88             |
|             | 월평균             | Mean  | 13.74                    | 16.35                    | 13.41                 | 13.63              | 12.01                    | 17.07            | 15.79             |
| 12월<br>Dec. | 상               | 순 1st | 10.12                    | 13.87                    | 11.45                 | 9.03               | 9.97                     | 15.50            | 13.59             |
|             | 중               | 순 2nd | 8.21                     | 13.42                    | 9.23                  | 7.76               | 9.20                     | 14.50            | 12.52             |
|             | 하               | 순 3rd | 6.21                     | 12.75                    | 10.75                 | 9.44               | 9.60                     | 14.42            | 12.07             |
|             | 월평균             | Mean  | 8.18                     | 13.35                    | 10.48                 | 8.84               | 9.57                     | 14.81            | 12.83             |
| 년<br>Year   | 년<br>Mean       | 평균    | 13.36                    | 15.53                    | 13.80                 | 14.21              | 15.32                    | 15.79            | 15.80             |

| 월<br>Month  | 관측지명<br>Station |           | 가덕도<br>Kadok-Do | 여수<br>Yosu | 소리도<br>Sori-Do | 저문도<br>Komun-Do | 자지도<br>Chaji-Do | 산지<br>Sanji | 서귀포<br>Sogwipo |
|-------------|-----------------|-----------|-----------------|------------|----------------|-----------------|-----------------|-------------|----------------|
|             | 순<br>Ten day    |           |                 |            |                |                 |                 |             |                |
| 1 월<br>Jan. | 상               | 순 1st     | 12.98           | 4.95       | 11.12          | 14.60           | 10.20           | 14.69       | 15.76          |
|             | 중               | 순 2nd     | 11.94           | 5.88       | 9.20           | 14.51           | 9.60            | 13.68       | 15.30          |
|             | 하               | 순 3rd     | 9.98            | 6.70       | 8.86           | 14.98           | 9.50            | 12.79       | 15.36          |
|             | 월평균             | Mean      | 11.63           | 5.84       | 9.73           | 14.69           | 9.67            | 13.72       | 15.43          |
| 2 월<br>Feb. | 상               | 순 1st     | 12.32           | 5.90       | 8.84           | 14.30           | 8.40            | 12.35       | 14.19          |
|             | 중               | 순 2nd     | 12.36           | 4.80       | 9.67           | 13.04           | 8.80            | 12.89       | 15.12          |
|             | 하               | 순 3rd     | 12.68           | 4.96       | 10.60          | 12.90           | 9.85            | 12.30       | 14.40          |
|             | 월평균             | Mean      | 12.45           | 5.22       | 9.70           | 13.41           | 9.02            | 12.51       | 14.57          |
| 3 월<br>Mar. | 상               | 순 1st     | 14.60           | 6.86       | 10.22          | 13.23           | 9.30            | 11.36       | 13.90          |
|             | 중               | 순 2nd     | 14.88           | 8.44       | 10.34          | 12.69           | 10.50           | 9.63        | 13.70          |
|             | 하               | 순 3rd     | 15.15           | 9.47       | 9.93           | 12.58           | 9.56            | 12.32       | 14.23          |
|             | 월평균             | Mean      | 14.88           | 8.26       | 10.16          | 12.83           | 9.79            | 11.51       | 13.94          |
| 4 월<br>Apr. | 상               | 순 1st     | 16.13           | 10.40      | 10.88          | 12.99           | 9.66            | 12.45       | 14.38          |
|             | 중               | 순 2nd     | 15.47           | 11.65      | 11.21          | 12.94           | 10.68           | 13.12       | 14.15          |
|             | 하               | 순 3rd     | 16.84           | 13.84      | 12.33          | 13.29           | 11.76           | 13.65       | 15.36          |
|             | 월평균             | Mean      | 16.15           | 11.96      | 11.47          | 13.07           | 10.70           | 13.07       | 14.63          |
| 5 월<br>May  | 상               | 순 1st     | 15.98           | 15.48      | 13.16          | 13.52           | 13.71           | 15.02       | 16.11          |
|             | 중               | 순 2nd     | 15.49           | 16.92      | 14.76          | 14.97           | 14.55           | 15.90       | 14.15          |
|             | 하               | 순 3rd     | 16.72           | 18.36      | 15.29          | 15.24           | 14.50           | 19.43       | 18.14          |
|             | 월평균             | Mean      | 16.06           | 16.92      | 14.40          | 14.58           | 14.35           | 16.78       | 16.13          |
| 6 월<br>Jun. | 상               | 순 1st     | 17.19           | 19.91      | 16.93          | 15.32           | 15.63           | 17.86       | 19.07          |
|             | 중               | 순 2nd     | 17.38           | 20.68      | 18.83          | 16.25           | 16.49           | 18.40       | 19.38          |
|             | 하               | 순 3rd     | 17.58           | 22.81      | 19.65          | 18.47           | 17.80           | 19.20       | 20.83          |
|             | 월평균             | Mean      | 17.38           | 21.13      | 18.47          | 16.68           | 16.64           | 18.49       | 19.76          |
| 7 월<br>Jul. | 상               | 순 1st     | 11.45           | 22.75      | 20.71          | 20.66           | 18.34           | 20.33       | 19.02          |
|             | 중               | 순 2nd     | 17.73           | 22.94      | 21.20          | 21.12           | 18.12           | 24.70       | 21.30          |
|             | 하               | 순 3rd     | 18.95           | 22.96      | 21.55          | 22.57           | 16.85           | 24.16       | 23.45          |
|             | 월평균             | Mean      | 18.04           | 22.88      | 21.15          | 21.45           | 17.77           | 23.06       | 21.26          |
| 8 월<br>Aug. | 상               | 순 1st     | 20.07           | 24.10      | 22.73          | 24.39           | 20.05           | 25.09       | 26.37          |
|             | 중               | 순 2nd     | 19.90           | 23.70      | 22.22          | 24.53           | 19.75           | 25.20       | 26.77          |
|             | 하               | 순 3rd     | 20.70           | 24.27      | 22.45          | 25.15           | 20.09           | 24.79       | 25.27          |
|             | 월평균             | Mean      | 20.22           | 24.02      | 22.47          | 24.68           | 19.96           | 25.03       | 26.14          |
| 9 월<br>Sep. | 상               | 순 1st     | 20.44           | 23.16      | 21.31          | 22.14           | 19.18           | 23.89       | 24.19          |
|             | 중               | 순 2nd     | 19.88           | 21.97      | 20.67          | 23.07           | 18.42           | 23.46       | 23.76          |
|             | 하               | 순 3rd     | 19.49           | 23.04      | 20.86          | 21.7            | 20.16           | 22.61       | 23.01          |
|             | 월평균             | Mean      | 19.94           | 23.13      | 20.95          | 22.33           | 19.25           | 23.32       | 23.65          |
| 10월<br>Oct. | 상               | 순 1st     | 19.24           | 21.74      | 21.55          | 20.58           | 10.40           | 21.72       | 23.45          |
|             | 중               | 순 2nd     | 19.23           | 19.93      | 18.28          | 21.70           | 16.70           | 20.47       | 22.31          |
|             | 하               | 순 3rd     | 18.65           | 18.71      | 18.89          | 19.79           | 16.14           | 19.40       | 22.13          |
|             | 월평균             | Mean      | 19.04           | 20.11      | 19.89          | 20.69           | 17.41           | 20.59       | 22.63          |
| 11월<br>Nov. | 상               | 순 1st     | 17.81           | 17.83      | 18.09          | 18.95           | 16.00           | 18.84       | 21.41          |
|             | 중               | 순 2nd     | 17.19           | 15.93      | 16.80          | 17.43           | 15.89           | 18.63       | 20.47          |
|             | 하               | 순 3rd     | 17.22           | 14.47      | 16.07          | 15.47           | 14.75           | 17.61       | 19.36          |
|             | 월평균             | Mean      | 17.41           | 16.07      | 16.99          | 17.28           | 15.55           | 18.36       | 20.41          |
| 12월<br>Dec. | 상               | 순 1st     | 14.56           | 12.22      | 14.40          | 14.80           | 12.88           | 16.64       | 17.87          |
|             | 중               | 순 2nd     | 12.61           | 9.52       | 13.12          | 14.69           | 12.40           | 15.54       | 16.81          |
|             | 하               | 순 3rd     | 12.18           | 8.01       | 13.33          | 14.42           | 12.09           | 15.49       | 15.87          |
|             | 월평균             | Mean      | 13.12           | 9.92       | 13.61          | 14.62           | 12.46           | 15.89       | 16.85          |
| 년<br>Year   | 년<br>Ten day    | 평<br>Mean | 16.36           | 15.46      | 15.75          | 19.19           | 14.38           | 17.69       | 18.79          |

| (15)<br>마라도<br>Mara-Do | (16)<br>죽도<br>Chuk-Do | (17)<br>흑산도<br>Huksan-Do | (18)<br>홍도<br>Hong-Do | (19)<br>목포<br>Mokpo | (20)<br>군산<br>Kunsan | (21)<br>어청도<br>Ochoung Do | (22)<br>격렬비도<br>Kyokryolbi-Do | (23)<br>부도<br>Pu-Do |
|------------------------|-----------------------|--------------------------|-----------------------|---------------------|----------------------|---------------------------|-------------------------------|---------------------|
| 15.82                  | 5.78                  | 14.97                    | 9.00                  | 6.48                | 2.36                 | 9.20                      | 9.74                          | 6.74                |
| 15.80                  | 4.25                  | 14.40                    | 8.44                  | 4.76                | 2.43                 | 7.88                      | 8.32                          | 4.20                |
| 15.50                  | 6.28                  | 15.01                    | 7.94                  | 4.98                | 2.54                 | 6.51                      | 6.02                          | 3.55                |
| <b>15.71</b>           | <b>5.44</b>           | <b>14.87</b>             | <b>8.44</b>           | <b>5.41</b>         | <b>2.78</b>          | <b>7.86</b>               | <b>8.03</b>                   | <b>4.83</b>         |
| 15.30                  | 5.20                  | 12.63                    | 7.31                  | 4.47                | 1.99                 | 5.50                      | 4.32                          | 2.50                |
| 14.70                  | 7.93                  | 11.09                    | 6.71                  | 5.30                | 3.77                 | 5.20                      | 4.87                          | 2.79                |
| 14.22                  | 5.31                  | 9.70                     | 6.50                  | 5.98                | 3.76                 | 4.20                      | 5.96                          | 2.66                |
| <b>14.74</b>           | <b>6.28</b>           | <b>11.14</b>             | <b>6.84</b>           | <b>5.25</b>         | <b>3.17</b>          | <b>4.97</b>               | <b>5.05</b>                   | <b>2.65</b>         |
| 13.86                  | 6.53                  | 9.03                     | 5.91                  | 5.53                | 4.28                 | 4.70                      | 6.64                          | 2.54                |
| 14.08                  | 8.20                  | 8.55                     | 6.14                  | 6.65                | 6.24                 | 4.52                      | 7.15                          | 3.07                |
| 14.04                  | 9.35                  | 8.72                     | 6.38                  | 7.46                | 7.76                 | 4.76                      | 7.64                          | 3.87                |
| <b>13.99</b>           | <b>8.03</b>           | <b>8.77</b>              | <b>6.14</b>           | <b>6.55</b>         | <b>6.09</b>          | <b>4.66</b>               | <b>7.14</b>                   | <b>3.16</b>         |
| 14.03                  | 8.73                  | 8.66                     | 6.73                  | 8.67                | 9.15                 | 5.11                      | 5.24                          | 4.61                |
| 14.67                  | 8.78                  | 8.75                     | 7.25                  | 10.70               | 11.32                | 5.80                      | 6.30                          | 5.10                |
| 15.64                  | 8.78                  | 8.84                     | 7.41                  | 12.54               | 13.59                | 6.88                      | 6.92                          | 7.17                |
| <b>14.78</b>           | <b>8.76</b>           | <b>8.75</b>              | <b>7.13</b>           | <b>10.67</b>        | <b>11.35</b>         | <b>5.93</b>               | <b>6.18</b>                   | <b>5.63</b>         |
| 16.21                  | 11.01                 | 9.26                     | 8.44                  | 13.91               | 14.92                | 7.37                      | 8.09                          | 8.82                |
| 16.73                  | 11.69                 | 10.47                    | 9.21                  | 15.99               | 17.30                | 9.21                      | 9.46                          | 10.88               |
| 18.07                  | 11.57                 | 12.85                    | 13.29                 | 15.89               | 19.80                | 10.99                     | 10.77                         | 12.96               |
| <b>17.00</b>           | <b>11.42</b>          | <b>10.96</b>             | <b>10.31</b>          | <b>15.26</b>        | <b>17.34</b>         | <b>9.19</b>               | <b>9.57</b>                   | <b>10.89</b>        |
| 17.84                  | 13.39                 | 13.64                    | 12.97                 | 18.26               | 20.35                | 1.62                      | 11.64                         | 13.97               |
| 19.04                  | 16.41                 | 15.11                    | 12.99                 | 19.18               | 22.27                | 13.56                     | 15.77                         | 15.32               |
| 20.04                  | 18.63                 | 17.07                    | 17.63                 | 20.40               | 23.78                | 14.58                     | 17.86                         | 17.33               |
| <b>13.97</b>           | <b>16.14</b>          | <b>15.27</b>             | <b>14.53</b>          | <b>19.28</b>        | <b>22.13</b>         | <b>13.59</b>              | <b>15.09</b>                  | <b>15.48</b>        |
| 21.89                  | 17.32                 | 19.49                    | 17.37                 | 20.99               | 25.31                | 15.99                     | 19.37                         | 18.21               |
| 23.36                  | 17.67                 | 21.47                    | 20.19                 | 22.25               | 23.91                | 17.69                     | 19.09                         | 19.00               |
| 24.70                  | 18.18                 | 19.55                    | 21.54                 | 23.26               | 24.56                | 19.58                     | 21.02                         | 20.59               |
| <b>23.32</b>           | <b>17.72</b>          | <b>20.17</b>             | <b>19.70</b>          | <b>22.17</b>        | <b>24.59</b>         | <b>17.75</b>              | <b>19.83</b>                  | <b>19.27</b>        |
| 26.35                  | 19.44                 | 20.84                    | 23.93                 | 24.82               | 26.71                | 21.96                     | 22.58                         | 21.79               |
| 27.15                  | 12.45                 | 20.27                    | 24.54                 | 25.76               | 27.71                | 23.68                     | 22.45                         | 22.70               |
| 25.28                  | 16.94                 | 23.62                    | 23.62                 | 25.50               | 27.81                | 23.27                     | 24.02                         | 23.72               |
| <b>26.26</b>           | <b>16.20</b>          | <b>21.58</b>             | <b>24.03</b>          | <b>25.36</b>        | <b>27.41</b>         | <b>22.36</b>              | <b>23.02</b>                  | <b>22.97</b>        |
| 23.66                  | 14.59                 | 23.86                    | 20.98                 | 24.09               | 25.42                | 24.90                     | 22.48                         | 23.88               |
| 24.21                  | 14.60                 | 23.36                    | 19.74                 | 22.80               | 23.74                | 22.51                     | 20.80                         | 23.24               |
| 24.13                  | 12.75                 | 22.52                    | 19.13                 | 22.32               | 23.40                | 21.55                     | 20.20                         | 22.50               |
| <b>24.00</b>           | <b>13.98</b>          | <b>23.25</b>             | <b>19.93</b>          | <b>23.10</b>        | <b>24.19</b>         | <b>22.99</b>              | <b>21.16</b>                  | <b>23.21</b>        |
| 23.76                  | 15.66                 | 21.60                    | 18.91                 | 20.55               | 20.75                | 14.35                     | 19.06                         | 21.03               |
| 22.47                  | 17.61                 | 19.96                    | 18.04                 | 18.62               | 17.65                | 7.45                      | 15.81                         | 19.22               |
| 22.26                  | 18.56                 | 19.79                    | 17.50                 | 17.89               | 17.99                | 8.95                      | 16.91                         | 18.13               |
| <b>22.89</b>           | <b>15.99</b>          | <b>20.40</b>             | <b>18.15</b>          | <b>19.02</b>        | <b>18.79</b>         | <b>10.25</b>              | <b>17.26</b>                  | <b>19.46</b>        |
| 20.02                  | 15.74                 | 19.15                    | 17.46                 | 17.21               | 11.89                | 6.90                      | 15.46                         | 16.87               |
| 21.39                  | 15.32                 | 18.60                    | 15.64                 | 14.72               | 12.30                | 6.40                      | 15.24                         | 15.02               |
| 17.58                  | 14.10                 | 16.82                    | 13.37                 | 13.04               | 9.70                 | 6.45                      | 14.40                         | 13.00               |
| <b>19.66</b>           | <b>15.05</b>          | <b>18.02</b>             | <b>15.49</b>          | <b>14.99</b>        | <b>12.63</b>         | <b>6.59</b>               | <b>15.06</b>                  | <b>14.96</b>        |
| 18.32                  | 13.96                 | 15.48                    | 12.85                 | 10.02               | 5.88                 | 2.85                      | —                             | 9.99                |
| 16.96                  | 11.51                 | 14.20                    | 12.13                 | 8.64                | 4.56                 | 2.25                      | —                             | 8.22                |
| 16.03                  | 9.63                  | 13.35                    | 10.86                 | 6.62                | 2.29                 | 0.85                      | —                             | 7.88                |
| <b>17.10</b>           | <b>11.70</b>          | <b>14.37</b>             | <b>11.95</b>          | <b>8.43</b>         | <b>4.24</b>          | <b>1.98</b>               | —                             | <b>8.70</b>         |
| <b>19.04</b>           | <b>12.23</b>          | <b>15.62</b>             | <b>13.55</b>          | <b>14.63</b>        | <b>14.56</b>         | <b>10.73</b>              | —                             | <b>12.58</b>        |



# 연안정지 월별 표면수비중

## Surface Water Density at the Shore Stations

| 월<br>Month        | 관측지명<br>Station |                    |                     |                   | 월<br>Month        | 관측지명<br>Station |                    |                     |                   |
|-------------------|-----------------|--------------------|---------------------|-------------------|-------------------|-----------------|--------------------|---------------------|-------------------|
|                   | 수 Ten day       | ①<br>군 산<br>Kunsan | ②<br>서귀포<br>Sogwipo | ③<br>부 산<br>Pusan |                   | 수 Ten day       | ①<br>군 산<br>Kunsan | ②<br>서귀포<br>Sogwipo | ③<br>부 산<br>Pusan |
| 1 월<br>Jan.       | 상 순 1st         | 17.50              | 25.12               | —                 | 7 월<br>Jul.       | 상 순 1st         | 18.48              | —                   | 25.28             |
|                   | 중 순 2nd         | 17.63              | 25.22               | —                 |                   | 중 순 2nb         | 1.20               | —                   | 23.31             |
|                   | 하 순 3rd         | 19.18              | 25.39               | —                 |                   | 하 순 3rd         | 0.98               | —                   | 22.92             |
|                   | 월평균 Mean        | 18.10              | 25.34               | —                 |                   | 월평균 Mean        | 6.98               | —                   | 23.83             |
| 2 월<br>Feb.       | 상 순 1st         | 19.50              | 25.14               | —                 | 8 월<br>Aug.       | 상 순 1st         | 4.89               | —                   | 23.10             |
|                   | 중 순 2nd         | 26.40              | 25.06               | —                 |                   | 중 순 2nd         | 4.23               | —                   | 21.57             |
|                   | 하 순 3rd         | 18.75              | 25.35               | —                 |                   | 하 순 3rd         | 6.96               | —                   | 24.88             |
|                   | 월평균 Mean        | 21.55              | 25.18               | —                 |                   | 월평균 Mean        | 5.36               | —                   | 23.18             |
| 3 월<br>Mar.       | 상 순 1st         | 16.67              | 25.48               | —                 | 9 월<br>Sep.       | 상 순 1st         | 5.17               | —                   | 23.68             |
|                   | 중 순 2nd         | 15.76              | 25.28               | —                 |                   | 중 순 2nd         | 11.61              | —                   | 24.51             |
|                   | 하 순 3rd         | 18.39              | 25.49               | —                 |                   | 하 순 3rd         | 13.04              | —                   | 23.38             |
|                   | 월평균 Mean        | 16.94              | 25.42               | —                 |                   | 월평균 Mean        | 9.94               | —                   | 23.95             |
| 4 월<br>Apr.       | 상 순 1st         | 19.05              | 25.27               | —                 | 10월<br>Oct.       | 상 순 1st         | 14.10              | —                   | 22.25             |
|                   | 중 순 2nd         | 17.40              | 25.37               | —                 |                   | 중 순 2nd         | 16.60              | —                   | 24.52             |
|                   | 하 순 3rd         | 18.57              | 25.42               | —                 |                   | 하 순 3rd         | 15.95              | —                   | 26.96             |
|                   | 월평균 Mean        | 18.34              | 25.35               | —                 |                   | 월평균 Mean        | 15.55              | —                   | 24.56             |
| 5 월<br>May        | 상 순 1st         | 19.62              | 25.42               | —                 | 11월<br>Nov.       | 상 순 1st         | 16.32              | —                   | 25.45             |
|                   | 중 순 2nd         | 16.78              | 24.89               | —                 |                   | 중 순 2nd         | 12.13              | —                   | 24.23             |
|                   | 하 순 3rd         | 17.73              | 23.74               | —                 |                   | 하 순 3rd         | 11.95              | —                   | 24.50             |
|                   | 월평균 Mean        | 18.04              | 24.68               | —                 |                   | 월평균 Mean        | 13.48              | —                   | 24.72             |
| 6 월<br>Jun        | 상 순 1st         | 19.58              | —                   | 25.47             | 12월<br>Dec.       | 상 순 1st         | 13.98              | —                   | 24.45             |
|                   | 중 순 2nd         | 18.47              | —                   | 24.33             |                   | 중 순 2nd         | 18.27              | —                   | 23.21             |
|                   | 하 순 3rd         | 18.93              | —                   | 24.13             |                   | 하 순 3rd         | 19.44              | —                   | 25.40             |
|                   | 월평균 Mean        | 18.99              | —                   | 25.64             |                   | 월평균 Mean        | 17.23              | —                   | 24.35             |
| 년<br>Year         |                 |                    |                     |                   | 년<br>Year         |                 |                    |                     |                   |
| 년평균 Mean          |                 |                    |                     |                   | 년평균 Mean          |                 |                    |                     |                   |
| 15.03 25.18 24.32 |                 |                    |                     |                   | 15.03 25.18 24.32 |                 |                    |                     |                   |

## 제 2 편

### 횡 단 정 선 해 양 관 측 성 적

(수온 염분 및 기상관측 자료)



## PART 2

### SECTIONAL OCEANOGRAPHIC OBSERVATIONS

(Temperature, Salinity and Meteorological Data)

1965



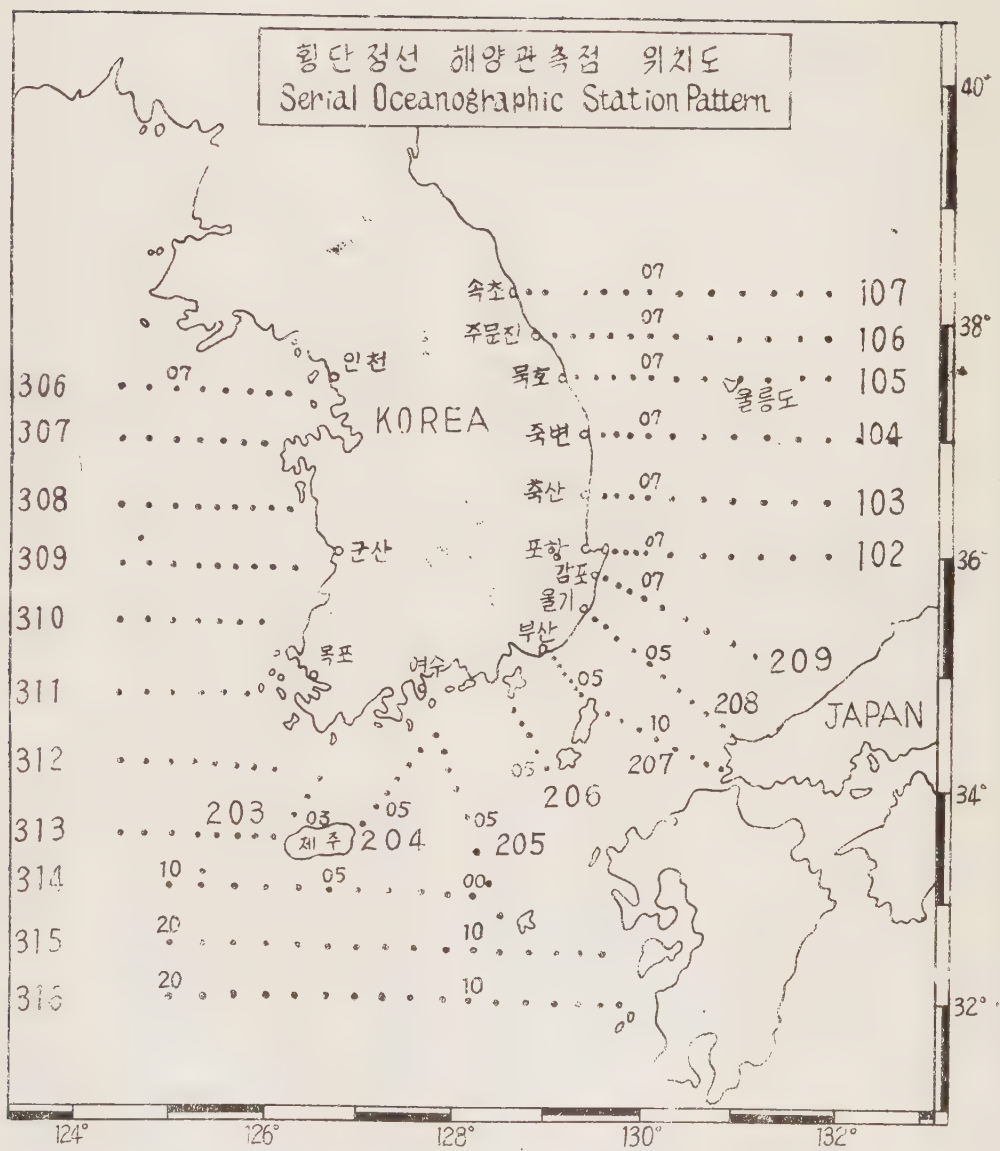
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형 단정선 해양관측점 위치표  
Position of the Serial Oceanographic Stations

| Sta. No. | 01                    | 02                    | 03                    | 04                    | 05                    | 06                    | 07                    | 08                    |
|----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Line     |                       |                       |                       |                       |                       |                       |                       |                       |
| 107      | 38°12.6'<br>128°38.0' | 38°12.6'<br>128°44.1' | 38°12.6'<br>128°50.5' | 38°12.6'<br>129°03.0' | 38°12.6'<br>129°21.8' | 38°12.6'<br>129°41.0' | 38°12.6'<br>130°00.0' | 38°12.6'<br>130°18.9' |
| 106      |                       | 37°54.0'<br>128°52.0' | 37°54.0'<br>128°56.8' | 37°54.0'<br>129°03.2' | 37°54.0'<br>129°22.3' | 37°54.0'<br>129°41.3' | 37°54.0'<br>130°00.0' | 37°54.0'<br>130°18.8' |
| 105      |                       |                       | 37°33.2'<br>129°10.1' | 37°33.2'<br>129°22.6' | 37°33.2'<br>129°35.1' | 37°33.2'<br>129°47.7' | 37°33.2'<br>130°00.0' | 37°33.2'<br>130°18.8' |
| 104      |                       |                       |                       | 37°03.8'<br>129°28.7' | 37°03.8'<br>129°35.0' | 37°03.8'<br>129°47.5' | 37°03.8'<br>130°00.0' | 37°03.8'<br>130°18.8' |
| 103      |                       |                       |                       | 36°30.1'<br>129°29.9' | 36°30.1'<br>129°36.0' | 36°30.1'<br>129°48.0' | 36°30.1'<br>130°00.1' | 36°30.1'<br>130°18.8' |
| 102      |                       |                       |                       | 36°04.6'<br>129°36.7' | 36°04.6'<br>129°40.6' | 36°04.6'<br>129°42.6' | 36°04.6'<br>130°00.6' | 36°04.6'<br>130°19.2' |
| 209      |                       |                       |                       | 35°47.8'<br>129°32.4' | 35°45.8'<br>129°38.0' | 35°41.5'<br>129°49.0' | 35°37.3'<br>130°00.0' | 35°31.0'<br>130°16.6' |
| 208      |                       |                       |                       | 35°28.7'<br>129°27.6' | 35°24.2'<br>129°34.0' | 35°17.8'<br>129°43.5' | 35°11.2'<br>129°52.8' | 35°04.1'<br>130°02.1' |
| 207      | 35°03.7'<br>129°09.1' | 34°59.7'<br>129°12.7' | 34°55.6'<br>129°16.3' | 34°51.1'<br>129°19.8' | 34°49.1'<br>129°22.0' | 34°45.1'<br>129°25.5' | 34°37.8'<br>129°33.3' | 34°32.1'<br>129°40.3' |
| 206      | 34°35.4'<br>128°35.0' | 34°29.3'<br>128°41.6' | 34°22.3'<br>128°50.3' | 34°14.9'<br>128°58.9' | 34°08.2'<br>129°07.8' |                       |                       |                       |
| 205      | 34°22.4'<br>127°49.4' | 34°15.0'<br>127°52.8' | 34°05.6'<br>127°56.6' | 33°51.2'<br>128°03.5' | 33°37.2'<br>128°09.8' | 33°23.2'<br>128°15.9' | 33°09.0'<br>128°21.8' | 32°54.9'<br>128°28.0' |
| 204      | 34°21.0'<br>127°44.0' | 34°13.8'<br>127°35.5' | 34°06.8'<br>127°26.5' | 33°54.1'<br>127°15.0' | 33°45.2'<br>127°09.0' | 33°36.7'<br>127°03.0' |                       |                       |
| 203      | 33°56.4'<br>126°30.9' | 33°47.2'<br>126°26.0' | 33°38.0'<br>126°21.5' |                       |                       |                       |                       |                       |
| 316      |                       |                       |                       | 32°00.0'<br>129°43.4' | 32°00.0'<br>129°25.8' | 32°00.0'<br>129°08.4' | 32°00.0'<br>128°50.8' | 32°00.0'<br>128°33.1' |
| 315      |                       |                       |                       |                       | 32°30.0'<br>129°28.2' | 32°30.0'<br>129°10.6' | 32°30.0'<br>128°52.7' | 32°30.0'<br>128°34.9' |
| 314      |                       | 33°00.0'<br>127°24.2' | 33°00.0'<br>127°06.0' | 33°00.0'<br>126°48.0' | 33°00.0'<br>126°30.2' | 33°00.0'<br>126°12.1' | 33°00.0'<br>125°54.2' | 33°00.0'<br>125°36.2' |
| 313      |                       | 33°24.3'<br>126°00.0' | 33°24.3'<br>125°48.0' | 33°24.3'<br>125°36.0' | 33°24.3'<br>125°24.0' | 33°24.3'<br>125°12.0' | 33°24.3'<br>125°00.0' | 33°24.8'<br>124°48.0' |
| 312      |                       | 33°58.3'<br>126°00.0' | 34°00.7'<br>125°54.5' | 34°00.7'<br>125°42.0' | 34°03.0'<br>125°30.6' | 34°04.5'<br>125°18.5' | 34°05.4'<br>125°00.0' | 34°05.4'<br>124°47.8' |
| 311      |                       |                       |                       | 34°42.8'<br>125°43.7' | 34°42.8'<br>125°31.7' | 34°42.8'<br>125°19.3' | 34°42.8'<br>125°00.0' | 34°42.8'<br>124°47.9' |
| 310      |                       |                       | 35°20.5'<br>125°49.6' | 35°20.5'<br>125°37.2' | 35°20.5'<br>125°24.7' | 35°20.5'<br>125°12.8' | 35°20.5'<br>125°00.0' | 35°20.5'<br>124°47.9' |
| 309      | 35°51.7'<br>126°14.2' | 35°51.7'<br>126°02.0' | 35°51.7'<br>125°49.7' | 35°51.7'<br>125°37.1' | 35°51.7'<br>125°24.9' | 35°51.7'<br>125°12.3' | 35°51.7'<br>125°00.0' | 31°51.7'<br>124°47.6' |
| 308      | 36°19.8'<br>126°14.6' | 36°19.8'<br>126°02.1' | 36°19.8'<br>125°49.7' | 36°19.8'<br>125°36.9' | 36°19.8'<br>125°24.7' | 36°19.8'<br>125°12.5' | 36°19.8'<br>125°00.0' | 36°19.8'<br>124°47.4' |
| 307      |                       |                       | 36°56.6'<br>125°59.9' | 36°55.5'<br>125°37.7' | 36°55.5'<br>125°25.1' | 36°55.5'<br>125°12.5' | 36°55.5'<br>125°00.0' | 36°55.5'<br>124°47.4' |
| 306      |                       | 37°17.1'<br>126°03.0' | 37°17.1'<br>125°50.4' | 37°17.1'<br>125°37.7' | 37°17.1'<br>125°25.2' | 37°17.1'<br>125°12.6' | 37°17.1'<br>125°00.0' | 37°17.1'<br>125°47.5' |

| Sta. No.<br>Line | 09                    | 10                       | 11                       | 12                             | 13                              | 14                      | 15                       | 16                    |
|------------------|-----------------------|--------------------------|--------------------------|--------------------------------|---------------------------------|-------------------------|--------------------------|-----------------------|
| 106              | 37°54.0'<br>130°37.9' | 37°54.0'<br>130°56.7'    | 37°54.0'<br>131°15.4'    | 37°54.0'<br>131°34.6'          | 37°54.0'<br>131°53.6'           |                         |                          |                       |
| 105              | 37°33.2'<br>130°37.7' | 37°33.2'<br>130°56.4'    |                          |                                |                                 |                         |                          |                       |
| 104              | 37°03.8'<br>130°37.5' | 37°03.8'<br>130°56.2'    | 37°03.8'<br>131°15.0'    | 37°03.8'<br>131°33.8'          | 37°03.8'<br>131°52.6'           |                         |                          |                       |
| 103              | 36°30.1'<br>130°37.5' | 36°30.1'<br>130°55.8'    | 36°30.1'<br>131°14.6'    | 36°30.1'<br>131°33.5'          | 36°30.1'<br>131°52.0'           |                         |                          |                       |
| 102              | 36°04.6'<br>130°36.6' | 36°04.6'<br>130°55.1'    | 36°04.6'<br>131°13.8'    | 36°04.6'<br>131°32.3'          | 36°04.6'<br>131°50.8'           |                         |                          |                       |
| 209              | 35°24.6'<br>130°32.2' | 35°17.9'<br>130°50.1'    | 35°11.4'<br>131°06.8'    | 35°05.0'<br>131°23.2'          |                                 |                         |                          |                       |
| 208              | 34°39.7'<br>130°39.5' | 34°33.1'<br>130°48.9'    |                          |                                |                                 |                         |                          |                       |
| 207              | 34°26.3'<br>129°47.1' | 34°20.7'<br>129°53.7'    | 34°15.1'<br>130°00.4'    | 34°09.1'<br>130°07.3'          | 34°03.3'<br>130°14.1'           |                         |                          |                       |
| 316              | 32°00.0'<br>128°15.2' | 32°00.0'<br>127°57.9'    | 32°00.0'<br>127°40.1'    | 32°00.0'<br>127°22.1'          | 32°00.0'<br>127°04.2'           | 32°00.0'<br>126°46.6'   | 32°00.0'<br>126°28.9'    | 32°00.0'<br>126°11.1' |
| 315              | 32°30.0'<br>128°17.1' | 32°30.0'<br>127°59.4'    | 32°30.0'<br>127°41.2'    | 32°30.0'<br>127°23.2'          | 32°30.0'<br>127°05.4'           | 32°30.0'<br>126°47.4'   | 32°30.0'<br>126°29.5'    | 32°30.0'<br>126°11.8' |
| 314              | 33°00.0'<br>125°18.1' | 33°00.0'<br>125°00.0'    |                          |                                |                                 |                         |                          |                       |
| 313              | 33°24.3'<br>124°36.0' |                          |                          |                                |                                 |                         |                          |                       |
| 312              | 34°05.4'<br>124°35.9' | W1<br>34°35'<br>126°10'  | W2<br>34°25'<br>126°05'  | W3<br>34°12'<br>126°08'        | W4<br>34°25'<br>125°00'         |                         |                          |                       |
| 311              | 34°42.8'<br>124°35.6' |                          |                          | W3<br>34°29' 1"<br>125°20' 20" | W4<br>34°17' 25"<br>124°58' 10" |                         |                          |                       |
| 310              | 35°20.5'<br>124°35.6' |                          |                          |                                |                                 |                         |                          |                       |
| 309              | 35°51.7'<br>124°35.1' | Y1'<br>36°10'<br>125°10' | Y2'<br>36°23'<br>125°10' | Y3'<br>36°40'<br>125°10'       |                                 |                         |                          |                       |
| 308              | 36°19.8'<br>124°34.7' |                          |                          |                                |                                 |                         |                          |                       |
| 307              | 36°55.5'<br>124°34.8' |                          |                          |                                | Y4'<br>36°27'<br>125°58'        | Y5'<br>35°57'<br>126°3' | Y6'<br>35°27'<br>126°10' |                       |
| 306              | 37°17.1'<br>124°34.8' |                          |                          |                                |                                 |                         |                          |                       |



| St. No. | 17                    | 18                    | 19                    | 20                    |  |  |
|---------|-----------------------|-----------------------|-----------------------|-----------------------|--|--|
| Line    |                       |                       |                       |                       |  |  |
| 316     | 32°00.0'<br>125°53.6' | 32°00.0'<br>125°35.8' | 32°00.0'<br>125°18.1' | 32°00.0'<br>125°00.0' |  |  |
| 315     | 32°30.0'<br>125°54.0' | 32°30.0'<br>125°35.7' | 32°30.0'<br>125°18.1' | 32°30.0'<br>125°00.0' |  |  |

동 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS  
EASTERN WATERS

1 9 6 5



## 107선 해양관측성적

Oceanographic Data, Line 107

| Date           |              | February |       |       |       | ② April |       |       |       |       |       |
|----------------|--------------|----------|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 01       | 02    | 03    | 04    | 01      | 02    | 03    | 04    | 05    | 06    |
| Day            |              | 19       | 19    | 19    | 19    | 14      | 14    | 14    | 14    | 15    | 15    |
| Item           | Time<br>Z(m) | 0812     | 0850  | 1010  | 1200  | 1800    | 1905  | 2015  | 2154  | 0010  | 0220  |
| T<br>°C        | 0            | 4.41     | 4.59  | 5.68  | 6.41  | 9.75    | 10.29 | 9.61  | 9.39  | 9.81  | 9.82  |
|                | 10           | 4.40     | 4.39  | 5.35  | 4.98  | 8.37    | 9.38  | 9.19  | 9.39  | 9.43  | 9.80  |
|                | 25           | 4.40     | 4.34  | 5.08  | 4.67  | 6.73    | 8.88  | 8.91  | 8.84  | 8.66  | 9.77  |
|                | 50           | —        | 4.29  | 4.47  | 4.40  | —       | 3.77  | 7.77  | 7.69  | 8.12  | 9.41  |
|                | 100          | —        | 2.90  | 4.03  | 3.06  | —       | 1.56  | 3.72  | 6.78  | 4.54  | 6.06  |
|                | 150          | —        | 1.97  | 1.62  | 2.78  | —       | 1.24  | 1.64  | 2.12  | 2.14  | 3.23  |
|                | 200          | —        | 1.43  | 1.35  | 1.37  | —       | 1.09  | 1.36  | 1.35  | 1.49  | 1.74  |
|                | 300          | —        | 1.03  | 1.01  | 0.97  | —       | 0.97  | 0.94  | 0.93  | 1.02  | 1.81  |
|                | Botm.        | 4.34     | —     | —     | —     | 4.00    | —     | —     | —     | —     | —     |
| S<br>‰         | 0            | 33.87    | 33.95 | 34.13 | 34.07 | 34.22   | 34.24 | 34.31 | 34.34 | 34.36 | 34.31 |
|                | 10           | 33.91    | 33.91 | 34.04 | 34.05 | 34.27   | 34.31 | 34.34 | 34.38 | 34.24 | 34.38 |
|                | 25           | 33.95    | 33.93 | 33.04 | 33.96 | 34.24   | 34.31 | 34.34 | 34.27 | 34.24 | 34.29 |
|                | 50           | —        | 33.89 | 33.95 | 33.96 | —       | 34.15 | 34.24 | 34.11 | 34.20 | 34.29 |
|                | 100          | —        | 33.87 | 33.89 | 33.93 | —       | 33.95 | 33.87 | 34.11 | 34.00 | 34.05 |
|                | 150          | —        | 33.96 | 33.96 | 34.00 | —       | 33.86 | 33.86 | 34.00 | 33.87 | 34.04 |
|                | 200          | —        | 34.04 | 34.05 | 33.96 | —       | 33.96 | 33.96 | 33.98 | 33.95 | 33.98 |
|                | 300          | —        | 34.05 | 34.05 | 34.09 | —       | 34.04 | 34.02 | 33.98 | 34.05 | 33.95 |
|                | Botm.        | 33.89    | —     | —     | —     | 34.22   | —     | —     | —     | —     | —     |
| Depth (m)      |              | 33       | —     | —     | —     | 45      | —     | 300   | —     | —     | —     |
| Secchi (m)     |              | 10       | 19    | 20    | 18    | 10      | —     | —     | —     | —     | —     |
| Color          |              | —        | —     | —     | —     | —       | —     | —     | —     | —     | —     |
| Sea            |              | 1        | 1     | 1     | 1     | 1       | 1     | 1     | 2     | 2     | 2     |
| Swell          |              | 1        | 1     | 1     | 1     | 1       | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |              | 4.8      | 5.4   | 6.3   | 5.6   | 9.91    | 10.48 | 10.92 | 10.52 | 11.4  | 10.81 |
| Baro. (mm)     |              | —        | —     | —     | —     | —       | —     | —     | —     | —     | —     |
| Wind           |              | NE. 1    | NE. 1 | NE. 1 | NE. 1 | S. 1    | S. 1  | S. 2  | S. 2  | S. 2  | S. 2  |
| Cloud          |              | Ac. 8    | Ac. 9 | Cs. 7 | Cs. 7 | Cs. 2   | Cs. 2 | 0     | 0     | 0     | 0     |
| Weather        |              | C        | C     | BC    | BC    | B       | B     | B     | B     | B     | B     |

| Date           |              | ③ June |       |       |       |       |       |
|----------------|--------------|--------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 01     | 02    | 03    | 04    | 05    | 06    |
| Day            |              | 13     | 13    | 13    | 13    | 13    | 13    |
| Item           | Time<br>Z(m) | 0510   | 0555  | 0655  | 0820  | 1025  | 1220  |
| T<br><br>°C    | 0            | 16.9   | 17.0  | 17.4  | 16.6  | 17.4  | 18.0  |
|                | 10           | 16.1   | 16.0  | 15.9  | 16.4  | 16.7  | 17.4  |
|                | 20           | 12.5   | 11.9  | 11.9  | 10.7  | 15.7  | 16.1  |
|                | 30           | 8.0    | 8.2   | 7.6   | 6.4   | 10.9  | 14.8  |
|                | 50           | —      | 5.0   | 4.3   | 3.9   | 5.3   | 10.8  |
|                | 75           | —      | 3.8   | 2.9   | 2.7   | 3.8   | 5.6   |
|                | 100          | —      | 2.7   | 2.5   | 2.0   | 2.7   | 4.2   |
|                | 150          | —      | 1.6   | 1.8   | 1.6   | 1.7   | 2.0   |
|                | 200          | —      | 1.4   | 1.5   | 1.4   | 1.4   | 1.5   |
|                | 250          | —      | 1.2   | 1.1   | 1.2   | 1.1   | 1.3   |
|                | Botm.        | 6.0    | —     | —     | —     | —     | —     |
| S<br><br>‰     | 0            | 34.45  | 34.47 | 34.13 | 34.60 | 34.54 | 33.92 |
|                | 10           | 34.61  | 34.33 | 34.52 | 34.67 | 34.29 | 34.52 |
|                | 20           | 34.52  | 34.29 | 34.24 | 34.51 | 34.52 | 34.52 |
|                | 30           | 34.11  | 34.22 | 34.05 | 34.16 | 34.37 | 34.67 |
|                | 50           | —      | 34.15 | 34.22 | 34.11 | 33.82 | 34.29 |
|                | 75           | —      | 33.93 | 33.81 | 34.07 | 34.18 | 34.22 |
|                | 100          | —      | 33.82 | 34.16 | 34.20 | 34.09 | 34.16 |
|                | 150          | —      | 33.78 | 34.00 | 34.11 | 34.27 | 34.13 |
|                | 200          | —      | 34.00 | 34.22 | 33.95 | 34.16 | 34.11 |
|                | 250          | —      | 34.07 | 34.31 | 33.86 | 34.05 | 34.07 |
|                | Botm.        | 33.89  | —     | —     | —     | —     | —     |
| Depth (m)      |              | 53     | —     | —     | —     | —     | —     |
| Secchi (m)     |              | 17     | 13    | 12    | 14    | 21    | —     |
| Color          |              | —      | —     | —     | —     | —     | —     |
| Sea            |              | 2      | 2     | 2     | 2     | 3     | 3     |
| Swell          |              | 1      | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |              | 15.3   | 15.6  | 17.7  | 15.6  | 18.7  | 17.2  |
| Baro. (mm)     |              | 768    | 767   | 767   | 669   | 768   | 770   |
| Wind           |              | NE. 1  | N. 2  | N. 2  | N. 2  | N. 3  | N. 3  |
| Cloud          |              | Cc. 7  | Cc. 8 | Cs. 7 | St. 2 | St. 2 | St. 2 |
| Weather        |              | C      | C     | C     | B     | B     | B     |



## 106 선 해 양 관 측 성 적

Oceanographic Data, Line 106

| Date           |              | ① February |       |       |       | ② April |       |       |       |       |       |
|----------------|--------------|------------|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 02         | 03    | 04    | 05    | 02      | 03    | 04    | 05    | 06    | 07    |
| Day            |              | 19         | 19    | 19    | 19    | 15      | 15    | 15    | 15    | 15    | 15    |
| Item           | Time<br>Z(m) | 1920       | 1845  | 1720  | 1510  | 1405    | 1820  | 1215  | 0945  | 0740  | 0525  |
| T<br>°C        | 0            | 8.81       | 9.05  | 10.69 | 16.38 | 8.95    | 9.48  | 10.11 | 9.21  | 9.30  | 10.28 |
|                | 10           | 8.00       | 9.41  | 10.14 | 10.52 | 8.09    | 9.38  | 9.96  | 8.98  | 9.10  | 10.31 |
|                | 25           | 4.89       | 8.72  | 8.89  | 9.67  | 6.07    | 8.37  | 9.61  | 8.49  | 8.17  | 10.00 |
|                | 50           | —          | 6.04  | 7.49  | 8.15  | —       | 2.36  | 8.87  | 6.76  | 6.96  | 9.61  |
|                | 100          | —          | 3.04  | 3.97  | 4.83  | —       | 2.62  | 6.49  | 6.48  | 4.26  | 7.08  |
|                | 150          | —          | —     | 2.02  | 2.81  | —       | —     | 1.72  | 2.41  | 2.14  | 3.40  |
|                | 200          | —          | —     | 1.51  | 1.76  | —       | —     | 1.19  | 1.49  | 2.11  | 1.83  |
|                | 300          | —          | —     | 1.11  | 1.05  | —       | —     | 0.90  | 1.03  | 0.84  | 1.07  |
|                | Botm.        | 4.77       | 1.80  | —     | —     | 4.68    | 1.59  | —     | —     | —     | —     |
| S<br>‰         | 0            | 34.29      | 34.42 | 34.47 | 34.56 | 34.27   | 34.27 | 34.29 | 34.29 | 34.13 | 34.31 |
|                | 10           | 34.33      | 34.42 | 34.47 | 34.45 | 34.15   | 34.22 | 34.43 | 34.25 | 34.16 | 34.31 |
|                | 25           | 33.96      | 34.31 | 34.33 | 34.33 | 34.07   | 34.22 | 34.31 | 34.20 | 34.16 | 34.31 |
|                | 30           | —          | 34.04 | 34.15 | 34.24 | —       | 34.16 | 34.20 | 33.96 | 34.13 | 34.31 |
|                | 100          | —          | 33.96 | 33.96 | 33.98 | —       | 33.95 | 33.98 | 33.95 | 34.95 | 33.96 |
|                | 150          | —          | —     | 34.04 | 34.02 | —       | —     | 33.95 | 33.93 | 33.86 | 33.86 |
|                | 200          | —          | —     | 34.05 | 34.05 | —       | —     | 33.95 | 34.00 | 33.98 | 33.91 |
|                | 300          | —          | —     | 34.05 | 34.09 | —       | —     | 33.95 | 34.02 | 34.04 | 33.95 |
|                | Botm.        | 34.13      | 33.96 | —     | —     | 34.04   | 33.93 | —     | —     | —     | —     |
| Depth (m)      |              | 38         | —     | —     | —     | 36      | 125   | —     | —     | —     | —     |
| Secchi (m)     |              | —          | —     | 10    | 14    | 5       | 8     | 10    | 10    | 13    | —     |
| Color          |              | —          | —     | —     | —     | —       | —     | —     | —     | —     | —     |
| Sea            |              | 3          | 3     | 4     | 3     | 3       | 3     | 3     | 2     | 2     | 2     |
| Swell          |              | 2          | 2     | 2     | 2     | 2       | 2     | 2     | 1     | 1     | 1     |
| Air Temp. (°C) |              | 7.8        | 6.0   | 8.3   | 7.0   | 18.6    | 18.2  | 18.5  | 12.3  | 11.4  | 11.3  |
| Baro. (mm)     |              | —          | —     | —     | —     | —       | —     | —     | —     | —     | —     |
| Wind           |              | NW. 3      | NW. 3 | NE. 4 | NE. 4 | W. 4    | W. 4  | W. 3  | SW. 2 | SW. 2 | SW. 2 |
| Cloud          |              | As. 8      | As. 8 | Cs. 8 | Cs. 8 | Ci. 2   | Ci. 2 | Ci. 1 | Ci. 2 | Ci. S | Cs. 1 |
| Weather        |              | C          | C     | C     | C     | B       | B     | B     | B     | B     | B     |

| Date           |              | ③ June |       |       |       |       |       |       |        |
|----------------|--------------|--------|-------|-------|-------|-------|-------|-------|--------|
| Sta. No.       |              | 02     | 03    | 04    | 05    | 06    | 07    | 02    | 03     |
| Day            |              | 13     | 13    | 13    | 13    | 13    | 13    | 2     | 2      |
| Item           | Time<br>Z(m) | 2320   | 2226  | 2120  | 1910  | 1710  | 1515  | 0529  | 0355   |
| T<br><br>C     | 0            | 17.5   | 17.7  | 18.5  | 18.6  | 18.7  | 18.6  | 22.70 | 22.69  |
|                | 10           | 15.9   | 16.0  | 16.4  | 16.6  | 18.0  | 17.7  | 17.44 | 19.65  |
|                | 20           | 10.8   | 11.7  | 15.0  | 14.7  | 16.8  | 16.3  | 15.93 | 15.77  |
|                | 30           | 9.2    | 9.6   | 11.1  | 11.8  | 14.7  | 13.9  | 12.56 | 10.41  |
|                | 50           | 4.8    | 5.2   | 5.7   | 7.9   | 10.6  | 86.8  | —     | 6.18   |
|                | 75           | —      | 4.0   | 4.6   | 4.3   | 5.5   | 5.3   | —     | 3.66   |
|                | 100          | —      | 2.5   | 2.8   | 3.2   | 3.6   | 4.9   | —     | 1.76   |
|                | 125          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 150          | —      | 1.6   | 1.6   | 1.8   | 2.6   | 3.8   | —     | 1.20   |
|                | 200          | —      | 1.5   | 1.3   | 1.4   | 1.7   | 2.3   | —     | —      |
|                | 250          | —      | 1.5   | 1.3   | 1.4   | 1.2   | 1.7   | —     | —      |
|                | 300          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 600          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 700          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 800          | —      | —     | —     | —     | —     | —     | —     | —      |
| Botm.          |              | 3.5    | —     | —     | —     | —     | —     | —     | —      |
| S<br><br>‰     | 0            | 34.50  | 34.48 | 34.56 | 34.57 | 34.58 | 34.54 | 31.83 | 31.92  |
|                | 10           | 34.55  | 34.38 | 34.48 | 34.57 | 34.51 | 34.65 | 33.47 | 33.37  |
|                | 20           | 34.37  | 34.32 | 34.31 | 34.61 | 34.61 | 34.04 | 33.87 | 33.44  |
|                | 30           | 34.35  | 34.35 | 38.29 | 34.66 | 34.63 | 34.63 | 34.30 | 33.95  |
|                | 50           | 34.64  | 34.35 | 34.20 | 34.42 | 34.59 | 34.38 | —     | 34.05  |
|                | 75           | —      | 34.36 | 34.32 | 34.31 | 34.39 | 34.04 | —     | 33.89  |
|                | 100          | —      | 34.39 | 34.34 | 34.27 | 34.29 | 34.11 | —     | 34.21  |
|                | 125          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 150          | —      | 34.37 | 34.33 | 34.29 | 34.22 | 33.95 | —     | 34.31  |
|                | 200          | —      | 34.60 | 34.57 | 34.64 | 34.19 | 34.10 | —     | —      |
|                | 250          | —      | 34.55 | 34.55 | 34.56 | 34.27 | 33.91 | —     | —      |
|                | 300          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 600          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 700          | —      | —     | —     | —     | —     | —     | —     | —      |
|                | 800          | —      | —     | —     | —     | —     | —     | —     | —      |
| Botm.          |              | 34.62  | —     | —     | —     | —     | —     | —     | —      |
| Depth (m)      |              | 68     | —     | —     | —     | —     | —     | 50    | 140    |
| Secchi (m)     |              | —      | —     | —     | 17    | 19    | 19    | —     | —      |
| Color          |              | —      | —     | —     | —     | —     | —     | —     | —      |
| Sea            |              | 3      | 3     | 4     | 3     | 3     | 3     | 2     | 3      |
| Swell          |              | 1      | 1     | 1     | 1     | 1     | 1     | —     | —      |
| Air Temp. (°C) |              | 15.1   | 15.5  | 16.2  | 16.3  | 16.5  | 18.7  | 22.0  | 22.1   |
| Baro. (mm)     |              | 768    | 768   | 768   | 768   | 768   | 768   | 1007  | 1007   |
| Wind           |              | NE. 3  | NE. 3 | N. 3  | N. 3  | N. 3  | N. S  | SE. S | SSE. 5 |
| Cloud          |              | St. 4  | Cs. 4 | Cc. 4 | St. 2 | St. 2 | St. 2 | 0     | 0      |
| Weather        |              | B      | B     | B     | B     | B     | B     | B     | B      |

## ④ August

| 04    | 05     | 06    | 07    | 08     | 09     | 10     | 11     | 12     | 13     |
|-------|--------|-------|-------|--------|--------|--------|--------|--------|--------|
| 2     | 1      | 1     | 1     | 1      | 1      | 31     | 31     | 31     | 30     |
| 0115  | 2210   | 1907  | 1610  | 1300   | 1000   | 0625   | 0330   | 0030   | 2020   |
| 22.92 | 22.85  | 23.12 | 23.46 | 22.94  | 23.49  | 23.93  | 23.49  | 23.41  | 24.07  |
| 18.10 | 15.17  | 23.16 | 22.31 | 22.05  | 21.11  | 22.52  | 18.89  | 22.50  | 21.74  |
| 10.97 | 9.14   | 14.52 | 11.09 | 16.60  | 18.46  | 18.31  | 17.71  | 17.13  | 14.86  |
| 6.68  | 7.66   | 11.72 | 8.11  | 16.06  | 17.01  | 16.65  | 15.02  | 13.91  | 14.03  |
| 4.07  | 4.38   | 7.87  | 5.04  | 12.37  | 15.01  | 14.78  | 15.13  | 10.82  | 9.03   |
| 2.38  | 2.99   | 3.63  | 3.64  | 4.66   | 13.96  | 14.18  | 13.68  | 10.34  | 3.62   |
| 1.39  | 2.10   | 2.46  | 2.48  | 3.07   | 10.55  | 13.48  | 10.49  | 9.13   | 2.23   |
| 1.23  | 1.60   | 2.09  | 1.92  | 2.78   | 9.17   | 12.18  | 8.07   | 4.05   | 1.79   |
| 1.08  | 1.30   | 1.54  | 1.90  | 2.60   | 7.40   | 10.86  | 5.50   | 2.10   | 1.60   |
| 1.03  | 1.28   | 1.30  | 1.15  | 1.89   | 4.35   | 6.90   | 3.39   | 1.69   | 1.28   |
| 0.71  | 0.90   | 0.82  | 1.02  | 1.20   | 3.13   | 3.40   | 1.89   | 1.59   | 1.08   |
| 0.90  | 0.80   | 0.68  | 0.69  | 0.98   | 1.70   | 2.00   | 1.26   | 1.00   | 0.70   |
| 0.59  | 0.50   | 0.50  | 0.60  | —      | 0.90   | —      | 0.94   | —      | 0.50   |
| 0.40  | 0.36   | 0.27  | 0.22  | —      | 0.50   | —      | 0.57   | —      | 0.20   |
| 0.28  | 0.18   | 0.18  | —     | —      | 0.19   | —      | 0.20   | —      | 0.16   |
| 0.14  | 0.14   | 0.15  | —     | —      | 0.17   | —      | 0.15   | —      | 0.14   |
| 33.26 | 33.41  | 33.52 | 33.11 | 33.44  | 33.03  | 32.63  | 32.78  | 33.19  | 33.33  |
| 34.06 | 34.29  | 33.53 | 33.65 | 33.53  | 33.60  | 32.97  | 33.15  | 33.58  | 33.26  |
| 34.40 | 34.44  | 34.20 | 34.24 | 33.71  | 34.44  | 34.48  | 34.03  | 33.91  | 34.18  |
| 34.29 | 34.46  | 34.60 | 34.19 | 33.73  | 34.57  | 34.52  | 34.13  | 34.06  | 34.60  |
| 34.34 | 34.18  | 34.56 | 34.25 | 34.26  | 34.67  | 34.58  | 34.57  | 34.13  | 34.49  |
| 34.22 | 34.24  | 34.35 | 34.19 | 34.30  | 34.77  | 34.58  | 34.69  | 34.09  | 34.23  |
| 34.23 | 34.18  | 34.33 | 34.23 | 34.31  | 34.62  | 34.68  | 34.47  | 34.46  | 34.22  |
| 34.23 | 34.21  | 34.34 | 34.39 | 34.30  | 34.53  | 34.75  | 34.31  | 34.30  | 34.17  |
| 34.26 | 34.17  | 34.32 | 34.47 | 34.30  | 34.39  | 34.68  | 34.20  | 34.21  | 34.17  |
| 34.31 | 34.20  | 34.34 | 34.40 | 34.34  | 34.20  | 34.39  | 34.24  | 34.20  | 34.17  |
| 34.32 | 34.31  | 34.34 | 34.20 | 34.33  | 34.24  | 34.28  | 34.14  | 34.23  | 34.20  |
| 34.32 | 34.35  | 34.34 | 34.20 | 34.34  | 34.31  | 34.22  | 34.12  | 34.24  | 34.22  |
| 34.35 | 34.36  | 34.37 | 34.28 | —      | 34.30  | —      | 34.16  | —      | 34.24  |
| 34.35 | 34.26  | 34.35 | 34.29 | —      | 34.31  | —      | 34.31  | —      | 34.24  |
| 34.36 | 34.25  | 34.34 | —     | —      | 34.30  | —      | 34.48  | —      | 34.22  |
| 34.36 | 34.24  | 34.36 | —     | —      | 34.31  | —      | 34.27  | —      | 34.20  |
| —     | —      | —     | —     | —      | —      | —      | —      | —      | —      |
| —     | —      | —     | —     | —      | —      | —      | —      | —      | —      |
| —     | —      | —     | —     | —      | —      | —      | —      | —      | —      |
| 3     | 4      | 3     | 3     | 4      | 4      | 3      | 3      | 3      | 3      |
| —     | —      | —     | —     | —      | —      | —      | —      | —      | —      |
| 23.0  | 23.0   | 23.2  | 24.0  | 23.5   | 24.0   | 24.0   | 23.0   | 23.0   | 25.0   |
| 1007  | 1007   | 1007  | 1006  | 1006   | 1006   | 1008   | 1008   | 1009   | 1011   |
| NW. 3 | NNW. 4 | N. 3  | NE. 2 | SSE. 3 | SSW. 2 | WSW. 2 | WSW. 1 | SE. 3  | SE. 3  |
| 0     | 0      | 0     | Ac. 1 | Cc. 9  | Cc. 10 | Cc. 10 | As. 1c | Cb. 10 | As. 10 |
| B     | B      | B     | B     | C      | C      | C      | C      | C      | C      |

| Date           |       | ⑤ October |       |       |       |       |       |       |       |       |       |
|----------------|-------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 02        | 03    | 04    | 05    | 06    | 07    | 08    | 09    | 10    |       |
| Day            |       | 23        | 23    | 23    | 23    | 22    | 22    | 22    | 22    | 22    |       |
| Item           | Time  | 0815      | 0725  | 0235  | 0020  | 2225  | 1910  | 1800  | 1520  | 1350  |       |
|                | Z(m)  |           |       |       |       |       |       |       |       |       |       |
| T              | °C    | 16.40     | 17.40 | 16.90 | 17.00 | 17.50 | 21.00 | 20.90 | 21.00 | 21.40 |       |
|                | 10    | 16.37     | 17.01 | 16.85 | 16.98 | 16.97 | 20.43 | 21.13 | 20.84 | 21.31 |       |
|                | 20    | 16.04     | 16.21 | 16.46 | 16.95 | 14.58 | 20.40 | 21.03 | 20.66 | 20.94 |       |
|                | 30    | —         | 11.13 | 14.26 | 16.02 | 12.99 | 20.52 | 21.04 | 20.54 | 21.26 |       |
|                | 50    | —         | 4.40  | 10.27 | 11.97 | 9.38  | 15.58 | 17.52 | 18.73 | 19.40 |       |
|                | 75    | —         | 2.37  | —     | 7.27  | 6.99  | 9.59  | 16.66 | 16.53 | 16.16 |       |
|                | 100   | —         | 1.71  | 2.55  | 5.47  | 4.63  | 6.67  | 10.30 | 12.63 | 12.59 |       |
|                | 125   | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
|                | 150   | —         | —     | 1.63  | 2.14  | 2.67  | 3.27  | 5.29  | 6.02  | 2.86  |       |
|                | 200   | —         | —     | 1.24  | 1.27  | 1.28  | 1.72  | 1.82  | 2.00  | 2.63  |       |
| C              | 250   | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
|                | 300   | —         | —     | 0.79  | 0.80  | 1.01  | 1.03  | 1.23  | 1.23  | 1.04  |       |
|                | 600   | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
|                | 700   | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
|                | 800   | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
|                | Botm. | 11.21     | 1.18  | —     | —     | —     | —     | —     | —     | —     |       |
|                | S     | °C        | 32.89 | 32.89 | 32.99 | 33.19 | 32.06 | 33.61 | 33.43 | 33.18 | 33.51 |
|                |       | 10        | 32.89 | 32.80 | 32.94 | 33.24 | 33.01 | 33.50 | 33.41 | 33.14 | 34.22 |
|                |       | 20        | 33.14 | 32.12 | 33.11 | 33.95 | 33.55 | 33.50 | 33.49 | 33.13 | 33.56 |
|                |       | 30        | —     | 34.23 | 34.23 | 34.07 | 34.13 | 33.50 | 33.51 | 33.13 | 33.55 |
| 50             |       | —         | 33.93 | 34.21 | 34.21 | 34.14 | 34.09 | 33.89 | 33.38 | 33.75 |       |
| 75             |       | —         | 33.91 | 34.20 | 34.32 | 34.04 | 34.12 | 33.89 | 34.20 | 34.23 |       |
| 100            |       | —         | 33.93 | 33.89 | 34.04 | 34.92 | 34.03 | 34.26 | 34.24 | 33.55 |       |
| 125            |       | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
| 150            |       | —         | —     | 34.00 | 33.93 | 34.90 | 33.90 | 33.98 | 34.03 | 33.91 |       |
| 200            |       | —         | —     | 33.96 | 33.94 | 34.89 | 33.89 | 33.92 | 33.86 | 33.93 |       |
| 250            |       | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
| 300            |       | —         | —     | 33.96 | 33.24 | 33.93 | 33.94 | 33.95 | 33.95 | 33.98 |       |
| 600            |       | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
| 700            |       | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
| 800            |       | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
| Botm.          |       | 33.91     | —     | —     | —     | —     | —     | —     | —     | —     |       |
| Depth (m)      |       | 30        | 140   | —     | —     | —     | —     | —     | —     | —     |       |
| Secchi (m)     |       | —         | —     | —     | —     | —     | —     | —     | 15    | 19    |       |
| Color          |       | —         | —     | —     | —     | —     | —     | —     | —     | —     |       |
| Sea            |       | 1         | 1     | —     | 3     | 2     | 1     | 1     | 1     | 1     |       |
| Swell          |       | 1         | 1     | —     | 2     | —     | 1     | 1     | 1     | 1     |       |
| Air Temp. (°C) |       | 13.5      | 13.5  | 13.4  | 15.4  | 15.5  | 15.4  | 14.5  | 15.5  | 17.3  |       |
| Baro. (mm)     |       | 763       | 763   | 764   | 764   | 765   | 767   | 767   | 767   | 767   |       |
| Wind           |       | SE. 1     | SE. 1 | SE. 3 | SE. 3 | NE. 2 | NE. 1 | NE. 1 | NE. 1 | NE. 1 |       |
| Cloud          |       | Cc. 7     | Cc. 7 | C. 6  | Cs. 7 | Cs. 8 | Cs. 9 | Cs. 5 | Ci. 1 | Ci. 1 |       |
| Weather        |       | BC        | BC    | BC    | BC    | C     | C     | BC    | B     | B     |       |

| ⑥ December |       |       |        |        |       |
|------------|-------|-------|--------|--------|-------|
| 02         | 04    | 06    | 08     | 10     | 12    |
| 4          | 4     | 4     | 4      | 3      | 3     |
| 1550       | 1255  | 0725  | 0205   | 2105   | 1515  |
| 11.27      | 11.00 | 11.60 | 18.13  | 15.94  | 15.95 |
| 11.26      | 10.99 | 16.17 | 18.14  | 15.94  | 15.94 |
| 11.28      | 10.99 | 15.97 | 18.14  | 15.95  | 15.93 |
| 11.23      | 10.90 | 15.20 | 17.75  | 15.96  | 15.93 |
| —          | 6.00  | 8.99  | 16.99  | 15.99  | 15.78 |
| —          | 3.25  | 7.70  | 16.95  | 16.00  | 15.55 |
| —          | 2.33  | 2.09  | 13.52  | 16.05  | 14.10 |
| —          | 1.37  | 1.90  | 6.95   | 10.50  | 10.90 |
| —          | 1.00  | 1.32  | 5.06   | 6.90   | 5.31  |
| —          | 1.00  | 0.90  | 1.57   | 1.90   | 2.32  |
| —          | 0.78  | 0.95  | 1.37   | 1.49   | 2.12  |
| —          | 0.69  | 0.65  | 0.60   | 1.50   | 0.89  |
| —          | 0.40  | 0.67  | 0.82   | 0.77   | 0.70  |
| —          | —     | 0.26  | 0.30   | 0.60   | 0.60  |
| —          | —     | 0.20  | 0.25   | 0.38   | 0.30  |
| —          | —     | —     | —      | —      | —     |
| 33.69      | 33.66 | 33.98 | 34.16  | 33.52  | 33.71 |
| 33.91      | 34.01 | 34.45 | 34.45  | 33.86  | 33.99 |
| 33.96      | 34.07 | 34.49 | 34.46  | 33.86  | 34.18 |
| 33.90      | 34.02 | 34.75 | 34.38  | 33.91  | 34.00 |
| —          | 34.42 | 34.53 | 34.37  | 33.90  | 34.00 |
| —          | 34.23 | 34.43 | 34.58  | 34.03  | 33.94 |
| —          | 34.20 | 34.19 | 34.60  | 34.79  | 34.45 |
| —          | 34.32 | 34.19 | 34.43  | 34.63  | 34.52 |
| —          | 34.32 | 34.20 | 34.34  | 34.40  | 34.38 |
| —          | 34.32 | 34.23 | 34.38  | 34.23  | 34.18 |
| —          | 34.34 | 34.54 | 34.42  | 34.18  | 34.24 |
| —          | 34.35 | 34.57 | 34.34  | 34.18  | 34.22 |
| —          | 34.35 | 34.29 | 34.30  | 34.28  | 34.21 |
| —          | —     | 34.27 | 34.24  | 34.26  | 34.21 |
| —          | —     | 34.34 | 34.28  | 34.26  | 34.23 |
| —          | —     | —     | —      | —      | —     |
| 35         | —     | —     | —      | —      | —     |
| 12         | 16    | 21    | —      | —      | 20    |
| 4          | 3     | 2     | —      | —      | 2     |
| 4          | 4     | 5     | 3      | 4      | 5     |
| 0          | 0     | 0     | 1      | 0      | 0     |
| 6.7        | 7.9   | 9.6   | 13.0   | 14.6   | 15.3  |
| 1020       | 1020  | 1019  | 1017   | 1016   | 1013  |
| N. 6       | N. 7  | NW. 8 | NW. 5  | W. 7   | SW. 8 |
| Ci. 1      | Ci. 1 | Ac. 8 | St. 10 | As. 10 | As. 9 |
| B          | B     | C     | C      | C      | C     |



# 105선 해양관측성적

Oceanographic Data, Line 105

| Date           |       | February |       |       |       |       |       |       |
|----------------|-------|----------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 03       | 04    | 05    | 06    | 07    | 08    | 09    |
| Day            |       | 23       | 23    | 23    | 23    | 23    | 23    | 23    |
| Item           | Time  | 0900     | 1000  | 1115  | 1335  | 1545  | 1820  | 2040  |
|                | Z(m)  |          |       |       |       |       |       |       |
| T              | 0     | 8.12     | 7.72  | 11.19 | 11.20 | 10.41 | 10.41 | 10.53 |
|                | 10    | 7.96     | 7.62  | 11.03 | 10.22 | 9.69  | 10.18 | 10.35 |
|                | 20    | —        | —     | —     | —     | —     | —     | —     |
|                | 25    | 8.01     | 7.51  | 11.14 | 10.81 | 10.47 | 10.44 | 10.50 |
|                | 30    | —        | —     | —     | —     | —     | —     | —     |
|                | 50    | —        | 5.99  | 8.29  | 9.15  | 10.60 | 10.20 | 10.57 |
|                | 100   | —        | 3.59  | 2.97  | 4.53  | 10.57 | 10.51 | 10.53 |
|                | 150   | —        | 1.91  | 1.72  | 2.31  | 8.62  | 10.47 | 10.49 |
|                | 200   | —        | —     | 1.39  | 1.41  | 5.34  | 7.56  | 9.68  |
|                | 250   | —        | —     | —     | —     | —     | —     | —     |
| C              | 300   | —        | —     | 1.08  | 1.08  | 1.29  | 4.08  | 5.54  |
|                | Botm. | 7.71     | 1.62  | —     | —     | —     | —     | —     |
| S              | 0     | 34.38    | 34.40 | 34.58 | 34.81 | 34.33 | 34.42 | 34.42 |
|                | 10    | 34.42    | 34.16 | 34.54 | 34.78 | 34.40 | 34.42 | 34.40 |
|                | 20    | —        | —     | —     | —     | —     | —     | —     |
|                | 25    | 34.33    | 34.31 | 34.52 | 34.51 | 34.38 | 34.33 | 34.33 |
|                | 30    | —        | —     | —     | —     | —     | —     | —     |
|                | 50    | —        | 34.29 | 34.36 | 34.45 | 34.38 | 34.33 | 34.38 |
|                | 100   | —        | 34.02 | 34.96 | 34.07 | 34.23 | 34.33 | 34.34 |
|                | 150   | —        | 34.02 | 34.96 | 34.05 | 34.25 | 34.24 | 34.33 |
|                | 200   | —        | —     | 33.96 | 34.04 | 34.11 | 34.14 | 34.33 |
|                | 250   | —        | —     | —     | —     | —     | —     | —     |
| ‰              | 300   | —        | —     | 33.96 | 34.04 | 34.11 | 34.15 | 34.33 |
|                | Botm. | 34.27    | 34.02 | —     | —     | —     | —     | —     |
| Depth (m)      |       | 50       | 180   | —     | —     | —     | —     | —     |
| Secchi (m)     |       | 11       | 15    | 14    | 17    | 21    | —     | —     |
| Color          |       | —        | —     | —     | —     | —     | —     | —     |
| Sea            |       | 3        | 2     | 2     | 4     | 4     | 4     | 4     |
| Swell          |       | 1        | 1     | 1     | 2     | 2     | 2     | 2     |
| Air Temp. (°C) |       | 1.9      | 1.7   | 2.2   | 2.2   | 3.8   | 3.0   | 3.2   |
| Boro. (mm)     |       | —        | —     | —     | —     | —     | —     | —     |
| Wind           |       | N. 3     | N. 2  | NE. 1 | NE. 3 | NE. 3 | N. 3  | N. 1  |
| Cloud          |       | Ca. 1    | Ca. 1 | Ca. 1 | Ca. 1 | Ca. 1 | Ca. 1 | Ca. 1 |
| Wind           |       | 1        | 1     | 1     | 2     | 2     | 2     | 2     |

② April

| 03             | 04             | 05             | 06             | 07             | 08             | 09             | 10             | 11             |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 16             | 16             | 16             | 16             | 16             | 17             | 17             | 17             | 17             |
| 1705           | 1735           | 1830           | 2038           | 2240           | 0045           | 0250           | 0445           | 0650           |
| 10.50<br>10.77 | 12.49<br>11.29 | 11.39<br>10.06 | 10.49<br>10.02 | 11.11<br>10.54 | 11.45<br>10.66 | 10.40<br>10.17 | 8.60<br>7.96   | 11.50<br>11.42 |
| —<br>9.74      | —<br>10.28     | —<br>8.14      | —<br>9.41      | —<br>7.95      | —<br>9.88      | —<br>9.09      | —<br>6.44      | —<br>10.52     |
| —<br>—         | —<br>5.37      | —<br>4.50      | —<br>9.18      | —<br>9.39      | —<br>9.44      | —<br>9.03      | —<br>5.02      | —<br>9.78      |
| —<br>—         | 1.90<br>1.30   | 1.63<br>1.56   | 6.14<br>2.23   | 7.81<br>5.01   | 9.35<br>7.56   | 5.76<br>3.12   | 3.27<br>2.34   | 6.11<br>2.11   |
| —<br>—         | —<br>—         | 1.17<br>—      | 1.44<br>—      | 2.54<br>—      | 5.01<br>—      | 2.11<br>—      | 1.56<br>—      | 1.44<br>—      |
| —<br>6.02      | —<br>1.11      | 0.78<br>—      | 1.14<br>—      | 1.05<br>—      | 1.47<br>—      | 1.14<br>—      | 0.87<br>—      | 0.79<br>—      |
| 34.29<br>34.27 | 34.38<br>34.40 | 34.40<br>34.40 | 34.29<br>34.29 | 34.42<br>34.40 | 34.45<br>34.43 | 34.31<br>34.27 | 34.15<br>34.13 | 34.40<br>34.38 |
| —<br>34.27     | —<br>34.40     | —<br>34.40     | —<br>34.22     | —<br>34.40     | —<br>34.40     | —<br>34.27     | —<br>34.07     | —<br>34.33     |
| —<br>—         | —<br>34.47     | —<br>34.05     | —<br>34.22     | —<br>34.29     | —<br>34.24     | —<br>34.16     | —<br>34.00     | —<br>34.33     |
| —<br>—         | 33.95<br>33.93 | 33.95<br>34.00 | 34.07<br>33.96 | 34.18<br>34.04 | 34.24<br>34.13 | 33.95<br>33.93 | 33.95<br>33.77 | 34.04<br>33.84 |
| —<br>—         | —<br>—         | 34.00<br>—     | 34.02<br>—     | 34.04<br>—     | 34.13<br>—     | 33.95<br>—     | 33.95<br>—     | 3.86<br>—      |
| —<br>33.95     | —<br>33.93     | 34.00<br>—     | 34.04<br>—     | 34.04<br>—     | 34.04<br>—     | 34.02<br>—     | 33.95<br>—     | 33.86<br>—     |
| 48             | 178            | —              | —              | —              | —              | —              | —              | —              |
| 9.5            | 14             | —              | —              | —              | —              | —              | —              | —              |
| —              | —              | —              | —              | —              | —              | —              | —              | —              |
| 1              | 1              | 1              | 1              | 1              | 1              | 1              | 1              | 1              |
| 1              | 1              | 1              | 1              | 1              | 1              | 1              | 2              | 1              |
| 14.6           | 15.3           | 13.04          | 11.7           | 13.1           | 16.95          | 11.40          | 11.95          | 13.70          |
| —              | —              | —              | —              | —              | —              | —              | —              | —              |
| SE. 1          | SE. 1          | ESE. 1         | SE. 1          | SE. 1          | SE. 1          | SE. 1          | SE. 1          | SW. 1          |
| Ci. 4          | Ci. 3          | Ci. 4          | Ac. 7          | Cc. 8          | Ac. 8          | Ac. 8          | Cs. 2          | Cs. 2          |
| BC             | BC             | BC             | BC             | C              | C              | BC             | B              | B              |

| Date           |              | ③ June |       |       |       |       |       |       |       |
|----------------|--------------|--------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 03     | 04    | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |              | 14     | 14    | 14    | 14    | 14    | 14    | 14    | 14    |
| Item           | Time<br>Z(m) | 0900   | 0945  | 1045  | 1240  | 1435  | 1630  | 1830  | 2030  |
| T<br><br>°C    | 0            | 16.8   | 17.4  | 17.6  | 18.8  | 18.4  | 18.2  | 17.8  | —     |
|                | 10           | 15.9   | 17.2  | 15.3  | 18.3  | 18.0  | 17.9  | 17.3  | 17.8  |
|                | 20           | 11.1   | 11.9  | 11.1  | 12.5  | 17.0  | 16.7  | 15.6  | 16.0  |
|                | 25           | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 30           | 10.3   | 8.4   | 8.9   | 9.3   | 15.3  | 15.3  | 13.6  | 14.5  |
|                | 50           | —      | 4.4   | 4.4   | 4.7   | 13.9  | 14.1  | 11.8  | 12.3  |
|                | 75           | —      | 2.7   | 3.3   | 3.6   | 12.5  | 10.8  | 11.0  | 10.5  |
|                | 100          | —      | 2.4   | 2.5   | 2.7   | 6.5   | 9.5   | 9.2   | 9.5   |
|                | 125          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 150          | —      | 1.7   | 1.8   | 1.8   | 2.3   | 7.1   | 8.3   | 8.5   |
|                | 200          | —      | —     | 1.6   | 1.5   | 1.5   | 3.5   | 3.9   | 6.0   |
|                | 250          | —      | —     | 1.3   | 1.2   | 1.3   | 2.1   | 3.0   | 2.8   |
|                | 300          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 400          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 500          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 600          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 5.6    | 1.5   | —     | —     | —     | —     | —     | —     |
| S<br><br>‰     | 0            | 34.51  | 34.48 | 34.64 | 34.57 | 34.66 | 34.00 | 33.96 | 33.79 |
|                | 10           | 34.44  | 34.66 | 34.58 | 34.60 | 34.70 | 34.75 | 33.58 | 33.89 |
|                | 20           | 34.41  | 34.44 | 34.37 | 34.34 | 34.75 | 34.79 | 33.29 | 33.69 |
|                | 25           | 34.68  | 34.41 | 34.44 | 34.34 | 34.77 | 34.65 | 32.79 | 33.73 |
|                | 30           | —      | 34.43 | 34.35 | 34.42 | 34.55 | 34.61 | 33.46 | 34.11 |
|                | 50           | —      | 34.45 | 34.43 | 34.42 | 34.44 | 34.53 | 33.05 | 34.16 |
|                | 75           | —      | 34.40 | 34.43 | 34.47 | 34.44 | 34.47 | 33.34 | 34.05 |
|                | 100          | —      | 34.67 | 34.37 | 34.41 | 34.44 | 34.31 | 33.45 | 33.72 |
|                | 125          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 150          | —      | —     | 34.64 | 34.37 | 34.71 | 34.31 | 33.12 | 33.78 |
|                | 200          | —      | —     | 34.59 | 34.75 | 34.68 | 34.30 | 32.95 | 33.61 |
|                | 250          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 300          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 400          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 500          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | 600          | —      | —     | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 34.67  | 34.68 | —     | —     | —     | —     | —     | —     |
| Depth (m)      |              | 57     | 175   | —     | —     | —     | —     | —     | —     |
| Secchi (m)     |              | 14     | 13    | 14    | 13    | —     | —     | 16    | —     |
| Color          |              | —      | —     | —     | —     | —     | —     | —     | —     |
| Sea            |              | 3      | 4     | 4     | 4     | 5     | 5     | 5     | 4     |
| Swell          |              | 1      | 2     | 2     | 2     | 3     | 3     | 3     | 3     |
| Air Temp. (°C) |              | 16.8   | 17.5  | 17.0  | 17.6  | 18.5  | 19.0  | 17.7  | 17.2  |
| Baro. (mm)     |              | 770    | 770   | 770   | 770   | 768   | 769   | 768   | 768   |
| Wind           |              | N. 5   | N. 6  | N. 6  | N. 6  | N. 7  | N. 6  | NE. 6 | NE. 4 |
| Cloud          |              | Cu. 2  | St. 3 | St. 1 | St. 2 | St. 3 | St. 2 | St. 3 | St. 5 |
| Weather        |              | B      | BC    | B     | B     | BC    | B     | BC    | BC    |



# 104선 해양관측성적

Oceanographic Data, Line 104

| Date           |       | ① February |       |       |       |       |       |       |
|----------------|-------|------------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04         | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |       | 27         | 26    | 26    | 26    | 26    | 26    | 24    |
| Item           | Time  | 0005       | 2315  | 2135  | 2000  | 1800  | 1540  | 0130  |
|                | Z(m)  |            |       |       |       |       |       |       |
| T<br>°C        | 0     | 9.71       | 9.05  | 9.78  | 10.82 | 9.62  | 8.89  | 9.90  |
|                | 10    | 9.66       | 9.06  | 9.54  | 10.64 | 9.32  | 8.54  | 9.73  |
|                | 25    | 9.84       | 9.31  | 9.26  | 9.83  | 9.25  | 8.64  | 9.25  |
|                | 50    | 8.86       | 8.15  | 9.81  | 8.81  | 9.22  | 8.69  | 8.90  |
|                | 100   | —          | 5.43  | 5.04  | 6.31  | 7.58  | 7.89  | 7.81  |
|                | 150   | —          | 1.95  | 1.73  | 2.40  | 4.16  | 5.05  | 4.64  |
|                | 200   | —          | —     | 1.30  | 1.47  | 2.02  | 2.34  | 2.08  |
|                | 300   | —          | —     | 1.02  | 0.77  | 1.37  | 1.70  | 1.55  |
|                | Botm. | 6.98       | 2.31  | —     | —     | —     | —     | —     |
| S<br>‰         | 0     | 34.54      | 34.34 | 34.43 | 34.43 | 34.42 | 34.33 | 34.33 |
|                | 10    | 34.52      | 34.40 | 34.40 | 34.42 | 34.40 | 34.24 | 34.29 |
|                | 25    | 34.47      | 34.40 | 34.40 | 34.40 | 34.36 | 34.24 | 34.27 |
|                | 50    | 34.34      | 34.38 | 34.38 | 34.24 | 34.36 | 34.24 | 34.24 |
|                | 100   | —          | 34.25 | 34.16 | 34.11 | 34.27 | 34.24 | 34.24 |
|                | 150   | —          | 34.20 | 34.05 | 34.11 | 34.07 | 34.07 | 34.02 |
|                | 200   | —          | —     | 34.05 | 34.96 | 34.05 | 34.05 | 34.02 |
|                | 300   | —          | —     | 34.11 | 34.96 | 34.04 | 34.05 | 33.96 |
|                | Botm. | —          | —     | —     | —     | —     | —     | —     |
| Depth (m)      |       | 93         | 185   | —     | —     | —     | —     | —     |
| Secchi (m)     |       | —          | —     | —     | —     | 18    | 21    | —     |
| Color          |       | —          | —     | —     | —     | —     | —     | —     |
| Sea            |       | 3          | 3     | 3     | 2     | 2     | 3     | 4     |
| Swell          |       | 1          | 1     | 1     | 1     | 1     | 1     | 2     |
| Air Temp. (°C) |       | 1.8        | 3.3   | 3.8   | 3.3   | 3.0   | 3.7   | 2.3   |
| Baro. (mm)     |       | —          | —     | —     | —     | —     | —     | —     |
| Wind           |       | NW. 3      | NW. 3 | NW. 3 | NW. 1 | NW. 1 | NW. 3 | N. 3  |
| Cloud          |       | Ci. 1      | Ci. 1 | Ci. 2 | Ci. 2 | Cs. 2 | Cu. 2 | As. 3 |
| Weather        |       | B          | B     | B     | B     | B     | B     | EC    |



2 April

| 04     | 05     | 06     | 07     | 08     | 09     | 10     | 11    |
|--------|--------|--------|--------|--------|--------|--------|-------|
| 20     | 20     | 20     | 20     | 20     | 17     | 17     | 17    |
| 1520   | 1635   | 1730   | 1910   | 2110   | 1500   | 1300   | 1040  |
| 11.50  | 10.00  | 10.00  | 10.00  | 9.99   | 10.58  | 11.00  | 11.70 |
| 11.66  | 9.87   | 9.72   | 9.82   | 9.90   | 10.00  | 10.10  | 11.15 |
| 11.69  | 9.80   | 9.70   | 9.79   | 9.89   | 9.48   | 9.36   | 10.37 |
| 9.81   | 9.80   | 9.43   | 9.49   | 9.61   | 9.38   | 9.18   | 8.72  |
| —      | 6.55   | 9.08   | 9.19   | 9.44   | 9.20   | 8.70   | 3.75  |
| —      | —      | 7.22   | 8.68   | 8.99   | 7.45   | 4.39   | 1.78  |
| —      | —      | 3.93   | 7.29   | 7.27   | 4.52   | 2.69   | 1.33  |
| —      | —      | 1.21   | 1.73   | 3.12   | 1.40   | 1.36   | 0.82  |
| —      | —      | —      | —      | —      | —      | —      | —     |
| 34.58  | 34.40  | 34.33  | 34.33  | 34.31  | 34.22  | 34.29  | 34.47 |
| 34.58  | 34.31  | 34.31  | 34.38  | 34.31  | 34.27  | 34.31  | 34.45 |
| 34.54  | 34.34  | 34.36  | 34.33  | 34.31  | 34.25  | 34.27  | 34.45 |
| 34.43  | 34.38  | 34.34  | 34.31  | 34.31  | 34.24  | 34.26  | 34.24 |
| —      | 34.31  | 34.31  | 34.31  | 34.31  | 34.04  | 34.09  | 33.95 |
| —      | —      | 34.18  | 34.31  | 34.31  | 33.93  | 33.95  | 33.95 |
| —      | —      | 34.04  | 34.18  | 34.15  | 33.95  | 33.91  | 33.95 |
| —      | —      | 34.04  | 34.02  | 34.04  | 33.95  | 33.91  | 33.95 |
| —      | —      | —      | —      | —      | —      | —      | —     |
| 100    | 140    | 300    | —      | —      | —      | —      | —     |
| 6.8    | —      | —      | —      | —      | 8.5    | 10.5   | 1.5   |
| —      | —      | —      | —      | —      | —      | —      | —     |
| 4      | 4      | 4      | 4      | 4      | 5      | 4      | 1     |
| 3      | 3      | 3      | 3      | 3      | 3      | 2      | 1     |
| 10.0   | 8.5    | 8.2    | 8.3    | 7.0    | 10.7   | 11.0   | 15.2  |
| —      | —      | —      | —      | —      | —      | —      | —     |
| NE. 3  | NE. 3  | NE. 4  | NE. 4  | NE. 4  | N. 4   | N. 3   | SW. 1 |
| Cu. 10 | Sc. 10 | Sc. 10 | Sc. 10 | Sc. 10 | As. 10 | As. 10 | As. 8 |
| C      | C      | C      | C      | C      | C      | C      | C     |

| Date           |              | (3) June |       |       |       |       |       |       |
|----------------|--------------|----------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 04       | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |              | 16       | 16    | 16    | 16    | 16    | 15    | 14    |
| Item           | Time<br>Z(m) | 0910     | 0820  | 0700  | 0530  | 0335  | 1915  | 2400  |
| T<br>°C        | 0            | 18.4     | 18.5  | 18.5  | 17.5  | 17.2  | 17.7  | 17.5  |
|                | 10           | 17.8     | 18.4  | 18.4  | 17.2  | 17.0  | 16.1  | 17.1  |
|                | 20           | 14.2     | 18.2  | 17.7  | 16.6  | 15.1  | 13.8  | 15.2  |
|                | 30           | 9.4      | 13.2  | 14.7  | 15.3  | 14.3  | 10.4  | 14.5  |
|                | 50           | 4.0      | 10.2  | 14.2  | 14.2  | 12.5  | 9.7   | 12.1  |
|                | 75           | —        | 5.2   | 9.2   | 12.0  | 10.5  | 9.5   | 9.7   |
|                | 100          | —        | 2.7   | 4.3   | 9.2   | 9.3   | 9.3   | 9.2   |
|                | 150          | —        | 1.9   | 2.2   | 5.5   | 8.5   | 9.0   | 8.2   |
|                | 200          | —        | —     | 1.8   | 2.6   | 5.2   | 7.8   | 5.1   |
|                | 250          | —        | —     | 1.5   | 1.7   | 4.5   | 5.2   | 2.9   |
| Botm.          |              | 3.0      | 1.6   | —     | —     | —     | —     | —     |
| S<br>‰         | 0            | 34.48    | 34.47 | 34.48 | 34.57 | 34.24 | 34.25 | 33.95 |
|                | 10           | 34.50    | 34.45 | 34.46 | 34.48 | 34.54 | 34.29 | 33.92 |
|                | 20           | 34.59    | 34.47 | 34.48 | 34.62 | 34.50 | 34.15 | 33.87 |
|                | 30           | 34.46    | 34.65 | 34.70 | 34.79 | 34.68 | 34.07 | 33.86 |
|                | 50           | 34.27    | 34.54 | 34.72 | 34.82 | 34.59 | 34.27 | 33.97 |
|                | 75           | —        | 32.29 | 34.53 | 34.65 | 34.43 | 34.45 | 34.10 |
|                | 100          | —        | 34.23 | 34.27 | 34.48 | 34.39 | 34.45 | 34.22 |
|                | 150          | —        | 34.26 | 34.22 | 34.30 | 34.29 | 34.24 | 34.17 |
|                | 200          | —        | —     | 34.24 | 34.24 | 34.20 | 34.32 | 34.14 |
|                | 250          | —        | —     | 34.24 | 34.23 | 34.12 | 34.10 | 34.10 |
| Botm.          |              | 34.26    | 34.21 | —     | —     | —     | —     | —     |
| Depth (m)      |              | 76       | 198   | —     | —     | —     | —     | —     |
| Secchi (m)     |              | 15       | 16    | 14    | 12    | —     | —     | —     |
| Color          |              | —        | —     | —     | —     | —     | —     | —     |
| Sea            |              | 3        | 4     | 3     | 3     | 2     | 3     | 3     |
| Swell          |              | 1        | 1     | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |              | 18.5     | 17.5  | 18.3  | 17.2  | 15.4  | 17.1  | 17.1  |
| Baro. (mm)     |              | 769      | 769   | 768   | 768   | 768   | 769   | 779   |
| Wind           |              | NW. 2    | NW. 4 | NW. 5 | NW. 3 | NW. 2 | SW. 2 | SW. 2 |
| Cloud          |              | St. 3    | St. 4 | Cc. 7 | Cc. 6 | St. 6 | St. 6 | St. 8 |
| Weather        |              | BC       | BC    | BC    | BC    | BC    | BC    | C     |

| Date           |           | ④ August   |        |        |        |        |        |        |        |        |        |       |
|----------------|-----------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| Sta. No.       |           | 04         | 05     | 06     | 07     | 08     | 09     | 10     | 11     | 12     | 13     |       |
| Day            |           | 27         | 27     | 26     | 26     | 26     | 26     | 26     | 26     | 26     | 25     |       |
| Item           | Time      | 0400       | 0230   | 2205   | 1935   | 1620   | 0650   | 1115   | 0347   | 0120   | 2225   |       |
| T              | 0         | 21.90      | 23.01  | 24.60  | 24.98  | 25.00  | 23.67  | 24.45  | 23.95  | 24.01  | 24.00  |       |
|                | 10        | 21.92      | 22.71  | 24.46  | 21.60  | 22.00  | 23.71  | 23.62  | 23.87  | 19.50  | 18.63  |       |
|                | 20        | 16.09      | 16.26  | 18.00  | 17.55  | 19.38  | 19.60  | 17.60  | 18.54  | 17.39  | 17.32  |       |
|                | 30        | 12.00      | 14.10  | 15.52  | 16.55  | 18.51  | 18.11  | 16.10  | 17.14  | 15.30  | 16.22  |       |
|                | 40        | 5.65       | 10.14  | 15.86  | 14.78  | 14.64  | 16.18  | 14.71  | 15.38  | 14.43  | 14.05  |       |
|                | 75        | 3.25       | 5.31   | 13.92  | 11.60  | 11.30  | 14.65  | 14.36  | 14.72  | 13.76  | 12.18  |       |
|                | 100       | 2.10       | 3.48   | 9.08   | 7.74   | 8.81   | 14.38  | 11.79  | 13.60  | 12.20  | 9.95   |       |
|                | 125       | —          | 3.30   | 7.05   | 6.29   | 7.20   | 8.48   | 9.48   | 10.30  | 9.55   | 9.00   |       |
|                | 150       | —          | 2.70   | 4.55   | 5.85   | 6.10   | 6.35   | 9.00   | 8.65   | 9.10   | 8.05   |       |
|                | 200       | —          | —      | 2.10   | 2.20   | 4.40   | 7.50   | 5.48   | 4.00   | 6.30   | 3.81   |       |
| C              | 250       | —          | —      | 1.20   | 1.30   | 1.80   | 2.65   | 2.61   | 2.24   | 3.20   | 1.82   |       |
|                | 300       | —          | —      | 1.06   | 1.08   | 1.31   | 1.90   | 1.79   | 1.50   | 1.99   | 1.40   |       |
|                | 400       | —          | —      | 0.81   | 0.76   | —      | 0.99   | 1.30   | 1.00   | —      | 0.80   |       |
|                | 500       | —          | —      | 0.54   | 0.50   | —      | 0.40   | 0.69   | 0.50   | —      | 0.39   |       |
|                | 600       | —          | —      | 0.35   | 0.32   | —      | 0.24   | 0.37   | 0.40   | —      | 0.24   |       |
|                | Bottom    | —          | —      | —      | —      | —      | —      | —      | —      | —      | —      |       |
|                | S         | 0          | 33.04  | 32.85  | 32.24  | 32.15  | 32.33  | 33.05  | 33.20  | 33.19  | 33.35  | 33.04 |
|                |           | 10         | 33.33  | 32.91  | 32.47  | 32.44  | 33.32  | 33.02  | 33.26  | 33.20  | 34.04  | 33.06 |
|                |           | 20         | 33.63  | 33.90  | 34.05  | 33.92  | 34.17  | 34.08  | 34.35  | 34.26  | 34.49  | 33.23 |
|                |           | 30         | 34.21  | 34.50  | 34.56  | 34.22  | 34.61  | 34.47  | 34.56  | 34.60  | 34.68  | 34.59 |
| 40             |           | 34.21      | 34.49  | 34.54  | 34.27  | 34.50  | 34.30  | 34.48  | 34.53  | 34.59  | 34.52  |       |
| 50             |           | 34.21      | 34.28  | 34.55  | 34.72  | 34.51  | 34.59  | 34.35  | 34.76  | 34.73  | 34.61  |       |
| 75             |           | 34.21      | 34.21  | 34.32  | 34.96  | 34.51  | 34.06  | 34.44  | 34.74  | 34.72  | 34.71  |       |
| 100            |           | —          | 34.21  | 34.30  | 33.90  | 34.38  | 34.31  | 34.65  | 34.62  | 34.56  | 34.58  |       |
| 125            |           | —          | 34.21  | 34.28  | 34.24  | 34.32  | 34.56  | 34.58  | 34.51  | 34.31  | 34.51  |       |
| 150            |           | —          | —      | 34.18  | 34.12  | 34.30  | 34.65  | 34.42  | 34.22  | 34.37  | 34.44  |       |
| %<br>/100      | 200       | —          | —      | 34.19  | 34.18  | 34.21  | 34.40  | 34.14  | 34.19  | 34.20  | 34.18  |       |
|                | 250       | —          | —      | 34.20  | 34.25  | 34.19  | 34.08  | 34.15  | 34.24  | 34.17  | 34.20  |       |
|                | 300       | —          | —      | 34.24  | 34.24  | —      | 34.11  | 34.16  | 34.21  | —      | 34.24  |       |
|                | 400       | —          | —      | 34.24  | 34.25  | —      | 34.13  | 34.21  | 34.22  | —      | 34.23  |       |
|                | 500       | —          | —      | 34.25  | 34.25  | —      | 34.13  | 34.23  | 34.23  | —      | 34.23  |       |
|                | 600       | —          | —      | —      | —      | —      | —      | —      | —      | —      | —      |       |
|                | Bottom    | —          | —      | —      | —      | —      | —      | —      | —      | —      | —      |       |
|                | Depth (m) | 112        | 201    | —      | —      | —      | —      | —      | —      | —      | —      | —     |
|                |           | Secchi (m) | —      | —      | —      | —      | —      | 17     | 17     | —      | —      | —     |
|                |           | Color      | —      | —      | —      | —      | 3      | 3      | 3      | —      | —      | —     |
| Sea            |           | 5          | 7      | 6      | 6      | 5      | 1      | 4      | 4      | 4      | 5      |       |
| Swell          |           | —          | —      | —      | —      | —      | —      | —      | —      | —      | —      |       |
| Air Temp. (°C) |           | 23.0       | 23.1   | 24.6   | 25.0   | 25.5   | 24.6   | 24.6   | 23.5   | 24.0   | 24.0   |       |
| Baro. (mm)     |           | 1010       | 1012   | 1013   | 1013   | 1014   | 1015   | 1015   | 1014   | 1015   | 1015   |       |
| Wind           |           | SSE. 4     | SSE. 5 | SSE. 4 | SSE. 4 | ESE. 3 | SSE. 3 | SSE. 2 | SSE. 2 | ESE. 2 | ENE. 3 |       |
| Cloud          |           | 0          | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |       |
| Weather        |           | B          | B      | B      | B      | B      | B      | B      | B      | B      | B      |       |

| Date           |       | ⑤ October |       |       |       |       |       |       |
|----------------|-------|-----------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04        | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |       | 18        | 18    | 19    | 19    | 19    | 19    | 19    |
| Item           | Time  | 0655      | 0840  | 0955  | 1130  | 1330  | 1540  | 1830  |
|                | Z(m)  |           |       |       |       |       |       |       |
| T              | 0     | 18.10     | 18.35 | 18.50 | 18.70 | 21.65 | 21.10 | 20.10 |
|                | 10    | 17.30     | 17.40 | 18.10 | 17.93 | 21.57 | 21.13 | 20.96 |
|                | 20    | 17.84     | 15.83 | 17.01 | 16.36 | 21.46 | 21.45 | 20.84 |
|                | 30    | 16.20     | 14.03 | 14.40 | 15.42 | 21.21 | 21.09 | 20.34 |
|                | 50    | 9.49      | 11.17 | 9.45  | 10.51 | 21.24 | 21.02 | 20.64 |
|                | 75    | 4.33      | 5.49  | 5.35  | 5.43  | 17.71 | 17.54 | 16.95 |
|                | 100   | —         | 2.89  | 3.88  | 4.00  | 21.47 | 16.13 | 15.17 |
|                | 125   | —         | —     | —     | —     | —     | —     | —     |
|                | 150   | —         | 1.32  | 1.75  | 1.88  | 4.22  | 9.05  | 11.89 |
|                | 200   | —         | —     | 1.95  | 1.45  | 1.98  | 3.88  | 3.57  |
|                | 250   | —         | —     | —     | —     | —     | —     | —     |
|                | 300   | —         | —     | 0.81  | 0.94  | 1.04  | 1.33  | 1.23  |
|                | 400   | —         | —     | —     | —     | —     | —     | —     |
| °C             | 500   | —         | —     | —     | —     | —     | —     | —     |
|                | 600   | —         | —     | —     | —     | —     | —     | —     |
|                | Botm. | 3.45      | 1.02  | —     | —     | —     | —     | —     |
| S              | 0     | 32.98     | 32.88 | 32.89 | 32.76 | 32.91 | 33.24 | 33.29 |
|                | 10    | 33.48     | 33.17 | 32.90 | 32.88 | 33.24 | 33.35 | 33.22 |
|                | 20    | 33.96     | 33.91 | 33.13 | 33.35 | 33.29 | 33.38 | 33.25 |
|                | 30    | 33.98     | 33.94 | 33.14 | 33.89 | 33.28 | 33.36 | 33.31 |
|                | 50    | 34.00     | 33.96 | 33.58 | 33.92 | 33.27 | 33.37 | 33.32 |
|                | 75    | 34.06     | 33.98 | 33.87 | 33.94 | 33.61 | 33.83 | 33.94 |
|                | 100   | —         | 33.98 | 33.92 | 33.94 | 33.92 | 33.95 | 34.08 |
|                | 125   | —         | —     | —     | —     | —     | —     | —     |
|                | 150   | —         | 34.18 | 33.92 | 33.96 | 33.95 | 33.97 | 34.31 |
|                | 200   | —         | —     | 34.00 | 34.01 | 33.98 | 34.23 | 34.39 |
|                | 250   | —         | —     | —     | —     | —     | —     | —     |
|                | 300   | —         | —     | 34.27 | 34.17 | 34.21 | 34.33 | —     |
|                | 400   | —         | —     | —     | —     | —     | —     | —     |
| ‰              | 500   | —         | —     | —     | —     | —     | —     | —     |
|                | 600   | —         | —     | —     | —     | —     | —     | —     |
|                | Botm. | 34.15     | 34.22 | —     | —     | —     | —     | —     |
| Depth (m)      |       | 95        | 192   | —     | —     | —     | —     | —     |
| Secchi (m)     |       | —         | 9     | 11.5  | 9     | 17    | 18    | —     |
| Color          |       | —         | —     | —     | —     | —     | —     | —     |
| Sea            |       | 3         | 7     | 1     | 1     | 1     | 1     | 1     |
| Swell          |       | 2         | 2     | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |       | 12.8      | 13.0  | 18.6  | 21.7  | 22.7  | 16.3  | —     |
| Baro. (mm)     |       | 765       | 765   | 765   | 765   | 765   | 765   | —     |
| Wind           |       | NW. 3     | NW. 3 | NE. 1 | NE. 1 | NE. 1 | E. 1  | E. 1  |
| Cloud          |       | St. 6     | St. 6 | Cc. 1 | Cl. 2 | —     | —     | Cs. 1 |
| Weather        |       | BC        | R     | B     | B     | B     | B     | B     |

| ⑥ December |        |       |       |       |       |
|------------|--------|-------|-------|-------|-------|
| 04         | 05     | 06    | 08    | 10    | 12    |
| 2          | 2      | 2     | 2     | 3     | 3     |
| 1330       | 1445   | 1635  | 2200  | 0330  | 0803  |
| 14.20      | 15.27  | 17.99 | 16.98 | 15.99 | 14.92 |
| 13.90      | 15.32  | 18.00 | 16.67 | 15.11 | 14.89 |
| 13.61      | 15.36  | 17.15 | 16.72 | 16.12 | 14.66 |
| 14.16      | 13.07  | 17.70 | 16.37 | 16.12 | 14.56 |
| 7.28       | 5.03   | 16.03 | 16.33 | 16.09 | 14.42 |
| 2.73       | 3.99   | 12.38 | 16.15 | 16.08 | 14.20 |
| —          | 2.66   | 11.21 | 13.70 | 16.25 | 10.15 |
| —          | 1.55   | 6.20  | 11.30 | 16.45 | 5.05  |
| —          | 1.17   | 4.00  | 9.80  | 6.92  | 4.04  |
| —          | —      | 0.99  | 5.16  | 3.60  | 2.00  |
| —          | —      | 0.92  | 1.86  | 1.72  | 1.43  |
| —          | —      | 0.90  | 1.47  | 1.10  | 1.02  |
| —          | —      | 0.70  | 0.70  | 1.10  | 1.60  |
| —          | —      | —     | 0.42  | 0.45  | 0.30  |
| —          | —      | —     | 0.30  | 0.46  | 0.75  |
| —          | —      | —     | —     | —     | —     |
| 33.73      | 33.90  | 33.01 | 33.75 | 33.70 | 33.78 |
| 34.14      | 34.40  | 34.47 | 34.12 | 33.98 | 34.09 |
| 34.14      | 34.43  | 34.36 | 34.03 | 33.98 | 34.04 |
| 34.32      | 34.60  | 34.37 | 34.10 | 33.98 | 34.01 |
| 34.43      | 34.35  | 34.30 | 33.90 | 33.99 | 33.94 |
| 34.33      | 34.38  | 34.65 | 34.18 | 33.88 | 34.32 |
| —          | 34.39  | 34.64 | 34.60 | 34.47 | 34.56 |
| —          | 34.23  | 34.54 | 34.64 | 34.56 | 34.30 |
| —          | 34.22  | 34.40 | 34.36 | 34.41 | 34.28 |
| —          | —      | 34.27 | 34.29 | 34.25 | 34.25 |
| —          | —      | 34.25 | 34.18 | 34.96 | 33.95 |
| —          | —      | 34.23 | 34.48 | 34.27 | 34.27 |
| —          | —      | 34.18 | 34.48 | 34.26 | 34.26 |
| —          | —      | —     | 34.22 | 34.23 | 34.24 |
| —          | —      | —     | 34.23 | 34.24 | 34.24 |
| —          | —      | —     | —     | —     | —     |
| 116        | 190    | 600   | —     | —     | —     |
| 10         | 10     | 7     | —     | —     | 15    |
| 3          | 3      | 3     | —     | —     | 2     |
| 1          | 2      | 2     | 4     | 4     | 5     |
| 3          | 3      | 3     | 3     | 3     | 3     |
| 8.0        | 7.5    | 8.4   | 12.0  | 14.0  | 13.2  |
| —          | 1021   | 1022  | 1022  | 1021  | 1022  |
| S. 3       | S. 3   | S. 4  | SW. 6 | SW. 8 | SW. 8 |
| St. 10     | St. 10 | Ac. 8 | Ac. 9 | Ci. 1 | Ci. 9 |
| C          | C      | C     | C     | B     | C     |

# 103선 해양관측성적

Oceanographic Data, Line 103

| Date           |              | ① February |       |       |       |       |       |       |
|----------------|--------------|------------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 04         | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |              | 27         | 27    | 28    | 28    | 28    | 28    | 28    |
| Item           | Time<br>Z(m) | 0500       | 0545  | 1015  | 1130  | 1345  | 1542  | 1740  |
| T<br>°C        | 0            | 9.15       | 10.12 | 9.95  | 10.82 | 10.80 | 12.05 | 11.72 |
|                | 10           | 8.47       | 10.04 | 9.59  | 10.62 | 10.60 | 11.97 | 11.43 |
|                | 25           | 9.03       | 10.36 | 9.61  | 10.62 | 10.61 | 11.93 | 11.53 |
|                | 50           | 9.24       | 10.11 | 9.33  | 10.63 | 10.68 | 10.79 | 11.50 |
|                | 100          | —          | 5.72  | 5.42  | 8.10  | 10.43 | 5.73  | 11.43 |
|                | 150          | —          | 2.83  | 2.93  | 2.75  | 2.48  | 2.35  | 6.91  |
|                | 200          | —          | —     | —     | 1.52  | 1.56  | 1.52  | 2.44  |
|                | 300          | —          | —     | —     | 0.98  | 0.87  | 0.93  | 1.44  |
|                | Botm.        | 5.26       | 3.05  | 1.82  | —     | —     | —     | —     |
| S<br>‰         | 0            | 34.45      | 34.47 | 34.49 | 34.51 | 34.54 | 34.74 | 34.51 |
|                | 10           | 34.42      | 34.43 | 34.49 | 34.51 | 34.52 | 34.67 | 34.33 |
|                | 25           | 34.42      | 34.42 | 34.42 | 34.51 | 34.51 | 34.67 | 34.40 |
|                | 50           | 34.40      | 34.42 | 34.34 | 34.51 | 34.43 | 34.51 | 34.33 |
|                | 100          | —          | 34.13 | 34.15 | 34.42 | 34.40 | 34.05 | 34.31 |
|                | 150          | —          | 34.07 | 34.11 | 34.15 | 34.20 | 34.13 | 34.05 |
|                | 200          | —          | —     | —     | 34.11 | 34.15 | 34.13 | 34.00 |
|                | 300          | —          | —     | —     | 34.11 | 34.15 | 34.11 | 33.93 |
|                | Botm.        | 34.11      | 34.43 | 34.09 | —     | —     | —     | —     |
| Depth (m)      |              | 98         | 175   | 170   | —     | —     | —     | —     |
| Secchi (m)     |              | —          | —     | 20    | 19    | 16    | 17    | 17    |
| Color          |              | —          | —     | —     | —     | —     | —     | —     |
| Sea            |              | 1          | 1     | 3     | 3     | 3     | 3     | 3     |
| Swell          |              | 1          | 1     | 1     | 2     | 2     | 2     | 2     |
| Air Temp. (°C) |              | 0.0        | 0.2   | 4.7   | 6.2   | 8.4   | 6.6   | —     |
| Baro. (mm)     |              | —          | —     | —     | —     | —     | —     | —     |
| Wind           |              | NW. 1      | NW. 2 | W. 2  | W. 2  | NW. 2 | NW. 2 | N. 2  |
| Cloud          |              | Cl. 1      | Cl. 1 | St. 2 | St. 2 | Cu. 2 | Cu. 2 | Cu. 2 |
| Weather        |              | B          | B     | B     | B     | B     | B     | B     |



## ② April

| 04    | 05    | 06    | 07    | 03    | 09    | 10    |
|-------|-------|-------|-------|-------|-------|-------|
| 21    | 21    | 21    | 21    | 21    | 21    | 21    |
| 0350  | 0440  | 0645  | 0740  | 0935  | 1205  | 1405  |
| 11.70 | 11.50 | 11.20 | 10.00 | 12.00 | 11.70 | 13.00 |
| 11.70 | 11.42 | 10.91 | 9.87  | 11.97 | 11.58 | 12.58 |
| 11.81 | 11.54 | 11.14 | 9.81  | 11.85 | 11.60 | 12.11 |
| 11.80 | 11.51 | 11.10 | 8.67  | 11.37 | 11.55 | 11.60 |
| —     | 7.33  | 7.97  | 6.35  | 9.23  | 9.20  | 7.22  |
| —     | 2.61  | 3.58  | 3.92  | 5.27  | 5.50  | 2.54  |
| —     | —     | 1.76  | 2.35  | 2.18  | 3.09  | 1.37  |
| —     | —     | 0.72  | 1.11  | 1.34  | 0.80  | 0.51  |
| 3.10  | 1.27  | —     | —     | —     | —     | —     |
| 34.67 | 34.65 | 34.58 | 34.42 | 34.65 | 34.58 | 34.76 |
| 34.67 | 34.60 | 34.60 | 34.40 | 34.65 | 34.61 | 34.74 |
| 34.67 | 34.58 | 34.58 | 34.40 | 34.65 | 34.58 | 34.74 |
| 34.67 | 34.58 | 34.58 | 34.29 | 34.58 | 34.61 | 34.65 |
| —     | 34.24 | 34.04 | 34.15 | 34.31 | 34.31 | 34.36 |
| —     | 34.02 | 34.04 | 34.04 | 34.04 | 34.15 | 34.13 |
| —     | —     | 33.98 | 34.04 | 34.04 | 34.07 | 34.07 |
| —     | —     | 33.93 | —     | 34.04 | 34.04 | 34.04 |
| 34.13 | 34.04 | —     | —     | 34.04 | —     | —     |
| 90    | 180   | —     | —     | —     | —     | —     |
| —     | —     | 17    | 11    | 15    | 17    | —     |
| —     | —     | —     | —     | —     | —     | —     |
| 3     | 3     | 2     | 2     | 3     | 3     | 3     |
| 3     | 3     | 2     | 2     | 2     | 2     | 2     |
| 8.5   | 8.2   | 7.8   | 8.9   | 8.4   | 8.9   | 8.5   |
| —     | —     | —     | —     | —     | —     | —     |
| NE. 3 | NE. 2 | NE. 2 | NE. 2 | NE. 2 | NE. 2 | NE. 2 |
| Cc. 3 | Cc. 3 | Sc. 2 | Cu. 2 | Cu. 2 | Cu. 7 | Cu. 7 |
| BC    | BC    | B     | B     | B     | BC    | BC    |

| Date           |      | ③ June |       |       |       |       |       |       |
|----------------|------|--------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |      | 04     | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |      | 11     | 11    | 11    | 10    | 10    | 10    | 10    |
| Item           | Time | 0955   | 0900  | 0730  | 2445  | 2245  | 2050  | 1850  |
|                | Z(m) |        |       |       |       |       |       |       |
| T<br>°C        | 0    | 17.9   | 18.2  | 18.3  | 18.2  | 18.0  | 17.4  | 17.7  |
|                | 10   | 17.6   | 18.0  | 18.1  | 18.0  | 17.5  | 16.6  | 17.1  |
|                | 20   | 16.2   | 17.0  | 17.2  | 17.0  | 17.1  | 15.9  | 15.9  |
|                | 30   | 14.0   | 14.8  | 15.7  | 16.1  | 15.7  | 15.0  | 15.0  |
|                | 50   | 13.7   | 14.4  | 14.4  | 14.8  | 14.5  | 12.8  | 12.2  |
|                | 75   | 10.6   | 12.9  | 13.7  | 13.9  | 11.2  | 11.0  | 10.9  |
|                | 100  | —      | 3.6   | 11.2  | 12.0  | 9.8   | 9.2   | 8.9   |
|                | 125  | —      | —     | —     | —     | —     | —     | —     |
|                | 150  | —      | —     | 4.0   | 7.0   | 6.6   | 5.7   | 4.8   |
|                | 200  | —      | —     | 2.0   | 2.5   | 3.2   | 3.2   | 2.6   |
|                | 250  | —      | —     | 1.8   | 1.7   | 1.9   | 2.0   | 1.7   |
|                | 300  | —      | —     | —     | —     | —     | —     | —     |
|                | 400  | —      | —     | —     | —     | —     | —     | —     |
|                | 500  | —      | —     | —     | —     | —     | —     | —     |
|                | 600  | —      | —     | —     | —     | —     | —     | —     |
| Botm.          |      | —      | —     | —     | —     | —     | —     | —     |
| S<br>‰         | 0    | 34.25  | 35.54 | 34.67 | 34.25 | 34.69 | 34.69 | 34.43 |
|                | 10   | 34.34  | 34.36 | 34.60 | 34.47 | 34.76 | 34.54 | 34.60 |
|                | 20   | 34.61  | 34.63 | 34.61 | 34.65 | 34.69 | 34.60 | 34.60 |
|                | 30   | 34.72  | 34.45 | 34.74 | 36.58 | 34.34 | 34.74 | 34.27 |
|                | 50   | 34.45  | 34.70 | 34.89 | 34.67 | 34.87 | 34.87 | 34.38 |
|                | 75   | 34.49  | 34.72 | 34.72 | 34.72 | 34.63 | 34.69 | 34.60 |
|                | 100  | —      | 34.11 | 34.45 | 34.49 | 34.25 | 34.54 | 34.43 |
|                | 125  | —      | —     | 33.98 | 34.16 | 34.11 | 34.34 | 34.18 |
|                | 150  | —      | —     | 33.89 | 34.27 | 35.07 | 34.15 | 33.73 |
|                | 200  | —      | —     | 34.00 | 34.29 | 33.78 | 34.16 | 34.18 |
|                | 250  | —      | —     | —     | —     | —     | —     | —     |
|                | 300  | —      | —     | —     | —     | —     | —     | —     |
|                | 400  | —      | —     | —     | —     | —     | —     | —     |
|                | 500  | —      | —     | —     | —     | —     | —     | —     |
|                | 600  | —      | —     | —     | —     | —     | —     | —     |
| Botm.          |      | 34.16  | 34.15 | —     | —     | —     | —     | —     |
| Depth (m)      |      | 105    | 152   | —     | —     | —     | —     | —     |
| Secchi (m)     |      | —      | 13    | 10    | —     | —     | —     | 17    |
| Color          |      | —      | —     | —     | —     | —     | —     | —     |
| Sea            |      | 4      | 5     | 4     | 4     | 4     | 4     | 3     |
| Swell          |      | 2      | 2     | 2     | 2     | 2     | 2     | 2     |
| Air Temp. (°C) |      | 18.9   | 18.0  | 17.5  | 17.5  | 17.5  | 17.7  | 20.4  |
| Baro. (mm)     |      | 769    | 768   | 772   | 771   | 772   | 771   | 772   |
| Wind           |      | SW. 5  | S. 6  | S. 5  | S. 5  | SE. 5 | SE. 5 | SE. 3 |
| Cloud          |      | St. 5  | St. 7 | St. 8 | St. 8 | Cc. 8 | St. 8 | St. 6 |
| Weather        |      | BC     | BC    | C     | C     | C     | C     | BC    |



# 102선 해양관측성적

Oceanographic Data, Line 102

| Date           |       | ① March. |       |       |       |       | February |       |
|----------------|-------|----------|-------|-------|-------|-------|----------|-------|
| Sta. No.       |       | 04       | 05    | 06    | 07    | 08    | 09       | 10    |
| Day            |       | 1        | 1     | 1     | 1     | 1     | 28       | 28    |
| Item           | Time  | 0820     | 0710  | 0525  | 0343  | 0120  | 2310     | 2105  |
|                | Z(m)  |          |       |       |       |       |          |       |
| T<br>°C        | 0     | 10.61    | 11.51 | 11.09 | 10.69 | 12.70 | 11.60    | 11.80 |
|                | 10    | 10.26    | 11.22 | 10.14 | 9.85  | 12.14 | 11.33    | 11.56 |
|                | 25    | 10.43    | 11.53 | 10.75 | 10.60 | 12.82 | 11.51    | 11.72 |
|                | 50    | —        | 10.41 | 10.81 | 10.61 | 12.81 | 11.59    | 11.80 |
|                | 100   | —        | 5.68  | 8.38  | 9.48  | 12.53 | 11.45    | 11.51 |
|                | 150   | —        | 2.80  | 3.12  | 2.59  | 3.47  | 6.31     | 6.53  |
|                | 200   | —        | —     | 2.00  | 1.69  | 1.72  | 2.38     | 1.76  |
|                | 300   | —        | —     | 1.17  | 0.95  | 1.01  | 0.84     | 0.80  |
|                | Botm. | 10.24    | 2.11  | —     | —     | —     | —        | —     |
| S<br>‰         | 0     | 34.15    | 34.45 | 34.52 | 34.51 | 34.60 | 34.42    | 34.42 |
|                | 10    | 34.42    | 34.56 | 34.52 | 34.40 | 34.60 | 34.45    | 34.49 |
|                | 25    | 34.42    | 34.43 | 34.45 | 34.42 | 34.60 | 34.42    | 34.38 |
|                | 50    | —        | 34.42 | 34.47 | 34.42 | 34.60 | 34.34    | 34.42 |
|                | 100   | —        | 34.13 | 34.24 | 34.33 | 34.56 | 34.40    | 34.34 |
|                | 150   | —        | 33.98 | 33.98 | 34.00 | 33.98 | 34.05    | 34.04 |
|                | 200   | —        | —     | 33.98 | 34.00 | 33.98 | 34.05    | 34.04 |
|                | 300   | —        | —     | 33.98 | 33.98 | 34.04 | 34.04    | 33.98 |
|                | Botm. | 34.49    | 33.98 | —     | —     | —     | —        | —     |
| Depth (m)      |       | 49       | 182   | —     | —     | —     | —        | —     |
| Secchi (m)     |       | —        | —     | —     | —     | —     | —        | —     |
| Color          |       | —        | —     | —     | —     | —     | —        | —     |
| Sea            |       | 2        | 2     | 2     | 2     | 2     | 3        | 3     |
| Swell          |       | 1        | 2     | 2     | 2     | 2     | 2        | 2     |
| Air Temp. (°C) |       | 1.8      | —     | 5.5   | 5.7   | 6.8   | 7.1      | 7.9   |
| Baro. (mm)     |       | —        | —     | —     | —     | —     | —        | —     |
| Wind           |       | NW. 2    | NW. 2 | N. 2  | N. 2  | N. 2  | N. 2     | N. 2  |
| Cloud          |       | Ci. 1    | Cs. 2 | Cs. 2 | Cs. 2 | Cs. 1 | Cs. 1    | Cs. 1 |
| Weather        |       | B        | B     | B     | B     | B     | B        | B     |

| ② April |       |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|-------|
| 04      | 05    | 01    | 07    | 08    | 09    | 10    |
| 22      | 22    | 22    | 21    | 21    | 21    | 21    |
| 0240    | 0150  | 0100  | 2335  | 2130  | 1920  | 1710  |
| 12.50   | 12.60 | 12.00 | 13.50 | 13.00 | 12.50 | 12.1  |
| 12.51   | 12.61 | 12.06 | 13.67 | 13.15 | 12.57 | 12.00 |
| 12.52   | 12.58 | 11.61 | 13.09 | 13.12 | 12.43 | 12.00 |
| —       | 11.49 | 7.04  | 12.70 | 13.30 | 12.30 | 11.81 |
| —       | 2.20  | 2.19  | 6.32  | 11.59 | 6.75  | 7.30  |
| —       | 1.37  | 1.52  | 2.03  | 3.33  | 2.55  | 2.43  |
| —       | —     | 1.14  | 1.35  | 1.64  | 1.41  | 1.25  |
| —       | —     | 0.61  | 0.72  | 0.87  | 0.75  | 0.62  |
| 11.55   | 0.89  | —     | —     | —     | —     | —     |
| 34.67   | 34.67 | 34.58 | 34.67 | 34.76 | 34.69 | 34.63 |
| 34.67   | 34.67 | 34.58 | 34.67 | 34.76 | 34.65 | 34.63 |
| 34.61   | 34.52 | 34.58 | 34.67 | 34.74 | 34.65 | 34.63 |
| —       | 34.56 | 34.24 | 34.67 | 34.74 | 34.65 | 34.63 |
| —       | 34.05 | 33.89 | 34.05 | 34.72 | 34.18 | 34.27 |
| —       | 33.96 | 34.05 | 33.95 | 34.02 | 34.02 | 34.05 |
| —       | —     | 34.02 | 33.95 | 34.02 | 34.04 | 34.05 |
| —       | —     | 33.96 | 33.96 | 33.96 | 34.05 | 34.04 |
| 34.51   | 33.95 | —     | —     | —     | —     | —     |
| 52      | 176   | —     | —     | —     | —     | —     |
| —       | —     | —     | —     | —     | —     | 17    |
| —       | —     | —     | —     | —     | —     | —     |
| 2       | 2     | 2     | 2     | 2     | 3     | 3     |
| 2       | 2     | 2     | 2     | 2     | 3     | 3     |
| 8.6     | 10.3  | 9.8   | 9.3   | 9.5   | 9.0   | 9.1   |
| —       | —     | —     | —     | —     | —     | —     |
| NE. 2   | NE. 2 | NE. 2 | NE. 2 | NE. 1 | NE. 2 | NE. 2 |
| 0       | St. 2 | St. 2 | 0     | 0     | Ci. 1 | Ci. 2 |
| B       | B     | B     | B     | B     | B     | B     |

| Date           |       | 3 June |       |       |       |       |       |       |
|----------------|-------|--------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04     | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |       | 10     | 10    | 10    | 10    | 10    | 10    | 10    |
| Item           | Time  | 0640   | 0725  | 0810  | 0935  | 1130  | 1330  | 1525  |
|                | Z (m) |        |       |       |       |       |       |       |
| T              | 0     | 17.3   | 17.2  | 17.7  | 18.5  | 18.6  | 18.5  | 17.8  |
|                | 10    | 17.2   | 16.2  | 16.5  | 18.2  | 18.1  | 18.2  | 17.0  |
|                | 20    | 15.5   | 13.0  | 14.5  | 17.9  | 17.5  | 17.3  | 16.1  |
|                | 30    | 11.3   | 10.8  | 13.4  | 16.3  | 16.4  | 16.8  | 15.9  |
|                | 50    | 4.7    | 6.0   | 11.1  | 13.8  | 14.5  | 14.9  | 14.1  |
|                | 75    | —      | 2.6   | 6.5   | 13.4  | 14.2  | 13.8  | 12.8  |
|                | 100   | —      | 2.1   | 2.5   | 11.9  | 13.3  | 12.2  | 10.3  |
|                | 125   | —      | —     | —     | —     | —     | —     | —     |
|                | 150   | —      | —     | 1.7   | 3.7   | 6.0   | 5.8   | 5.3   |
|                | 200   | —      | —     | 1.0   | 2.0   | 2.8   | 3.4   | 2.2   |
|                | 250   | —      | —     | 0.8   | 1.6   | 1.9   | 2.0   | 1.5   |
|                | 300   | —      | —     | —     | —     | —     | —     | —     |
|                | 400   | —      | —     | —     | —     | —     | —     | —     |
| C              | 500   | —      | —     | —     | —     | —     | —     | —     |
|                | 600   | —      | —     | —     | —     | —     | —     | —     |
|                | Botm. | 3.3    | 1.7   | —     | —     | —     | —     | —     |
| S              | 0     | 34.63  | 34.58 | 34.63 | 34.60 | 34.52 | 34.18 | 34.79 |
|                | 10    | 34.69  | 34.69 | 34.60 | 34.54 | 34.45 | 34.40 | 34.78 |
|                | 20    | 34.61  | 33.70 | 34.78 | 34.61 | 34.76 | 34.42 | 34.78 |
|                | 30    | 34.69  | 34.67 | 34.78 | 34.69 | 34.69 | 34.43 | 34.87 |
|                | 50    | —      | 34.47 | 34.63 | 34.87 | 34.87 | 34.89 | 34.78 |
|                | 75    | —      | 34.25 | 34.52 | 34.81 | 34.76 | 34.52 | 34.81 |
|                | 100   | —      | 34.29 | 33.78 | 34.78 | 34.76 | 34.25 | 34.61 |
|                | 125   | —      | —     | —     | —     | —     | —     | —     |
|                | 150   | —      | —     | 34.25 | 34.33 | 35.52 | 33.96 | 34.22 |
|                | 200   | —      | —     | 34.21 | 34.29 | 35.52 | 34.16 | 34.16 |
|                | 250   | —      | —     | 34.25 | 34.31 | 34.78 | 34.20 | 34.00 |
|                | 300   | —      | —     | —     | —     | —     | —     | —     |
|                | 400   | —      | —     | —     | —     | —     | —     | —     |
|                | 500   | —      | —     | —     | —     | —     | —     | —     |
| ‰              | 600   | —      | —     | —     | —     | —     | —     | —     |
|                | Botm. | —      | 34.11 | —     | —     | —     | —     | —     |
| Depth (m)      |       | 62     | 146   | —     | —     | —     | —     | —     |
| Secchi (m)     |       | 18     | 9     | 10    | 18    | 17    | 16    | 14    |
| Color          |       | —      | —     | —     | —     | —     | —     | —     |
| Sea            |       | 2      | 2     | 3     | 3     | 4     | 4     | 4     |
| Swell          |       | 1      | 1     | 2     | 2     | 2     | 2     | 2     |
| Air Temp. (°C) |       | 17.5   | 17.7  | 18.5  | 19.0  | 18.0  | 18.0  | 19.2  |
| Baro. (mm)     |       | 771    | 772   | 772   | 771   | 772   | 772   | 772   |
| Wind           |       | SE. 2  | SE. 3 | SE. 3 | SE. 3 | SE. 4 | SE. 4 | SE. 4 |
| Cloud          |       | Cs. 7  | Cs. 7 | Cu. 8 | Cu. 8 | St. 9 | St. 9 | Cs. 8 |
| Weather        |       | C      | C     | C     | C     | C     | C     | C     |





| Date           |              | ⑤ October |       |       |       |       |       |       |
|----------------|--------------|-----------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 04        | 05    | 06    | 07    | 08    | 09    | 10    |
| Day            |              | 17        | 17    | 17    | 17    | 17    | 17    | 17    |
| Item           | Time<br>Z(m) | 0915      | 1020  | 1120  | 1320  | 1530  | 1750  | 2020  |
| T              | 0            | 18.50     | 20.40 | 22.50 | 22.00 | 21.80 | 21.50 | 20.80 |
|                | 10           | 17.63     | 20.25 | 22.15 | 21.94 | 21.58 | 21.48 | 20.45 |
|                | 20           | 14.54     | 19.91 | 22.03 | 21.64 | 21.43 | 21.22 | 20.26 |
|                | 30           | 11.22     | 18.57 | 21.98 | 21.85 | 21.38 | 21.14 | 20.25 |
|                | 50           | 7.04      | 12.40 | 17.53 | 21.54 | 21.25 | 21.04 | 18.40 |
|                | 75           | —         | 5.27  | 11.23 | 16.55 | 17.56 | 13.37 | 15.99 |
|                | 100          | —         | 3.40  | 6.27  | 14.63 | 15.31 | 15.64 | 14.32 |
|                | 125          | —         | —     | —     | —     | —     | —     | —     |
|                | 150          | —         | 1.67  | 1.68  | 1.83  | 6.96  | 9.19  | 11.35 |
|                | 200          | —         | 1.34  | 1.24  | 1.55  | 1.92  | 4.59  | 7.98  |
|                | 250          | —         | —     | —     | —     | —     | —     | —     |
|                | 300          | —         | —     | 0.85  | 0.86  | 1.62  | 1.70  | 1.87  |
|                | 400          | —         | —     | —     | —     | —     | —     | —     |
|                | 500          | —         | —     | —     | —     | —     | —     | —     |
|                | 600          | —         | —     | —     | —     | —     | —     | —     |
| Botm.          |              | 4.91      | —     | —     | —     | —     | —     | —     |
| S              | 0            | 33.02     | 32.90 | 33.35 | 33.24 | 33.31 | 32.87 | 32.81 |
|                | 10           | 34.04     | 32.91 | 33.54 | 33.21 | 33.31 | 33.16 | 32.83 |
|                | 20           | 33.42     | 32.93 | 33.55 | 33.49 | 33.32 | 33.41 | 32.89 |
|                | 30           | 34.03     | 32.95 | 33.55 | 33.96 | 33.35 | 33.97 | 32.85 |
|                | 50           | 34.09     | 32.95 | 33.58 | 33.98 | —     | 33.98 | 33.12 |
|                | 75           | —         | 33.85 | 34.18 | 34.22 | —     | 34.02 | 33.15 |
|                | 100          | —         | 33.92 | 34.10 | 33.96 | 34.36 | 34.28 | 33.15 |
|                | 125          | —         | —     | —     | —     | —     | —     | —     |
|                | 150          | —         | 33.94 | 33.97 | 33.99 | 33.56 | 34.34 | 33.67 |
|                | 200          | —         | —     | 33.96 | 34.04 | 33.57 | 34.37 | 34.05 |
|                | 250          | —         | —     | —     | —     | —     | —     | —     |
|                | 300          | —         | —     | 33.96 | 34.32 | 34.22 | 34.37 | 34.22 |
|                | 400          | —         | —     | —     | —     | —     | —     | —     |
|                | 500          | —         | —     | —     | —     | —     | —     | —     |
|                | 600          | —         | —     | —     | —     | —     | —     | —     |
| Botm.          |              | 33.96     | 33.97 | —     | —     | —     | —     | —     |
| Depth (m)      |              | 58        | 180   | —     | —     | —     | —     | —     |
| Secchi (m)     |              | —         | 14    | 18    | 17    | 13    | —     | —     |
| Color          |              | —         | —     | —     | —     | —     | —     | —     |
| Sea            |              | 2         | 1     | 2     | 2     | 2     | 3     | 3     |
| Swell          |              | 3         | 3     | 3     | 3     | 3     | 3     | 2     |
| Air Temp. (°C) |              | 14.8      | —     | 15.8  | 19.0  | 13.0  | 15.5  | 15.9  |
| Baro. (mm)     |              | 765       | 765   | 765   | 724   | 764   | 764   | —     |
| Wind           |              | N. 2      | N. 2  | N. 2  | N. 2  | N. 2  | N. 3  | N. 3  |
| Cloud          |              | Cs. 2     | Cs. 2 | Cc. 2 | Cc. 5 | Cc. 5 | St. 5 | St. 6 |
| Weather        |              | B         | B     | B     | BC    | BC    | BC    | BC    |

⑥ December

| 05    | 06    | 08    | 10    | 12    |
|-------|-------|-------|-------|-------|
| 8     | 8     | 10    | 10    | 10    |
| 1040  | 1200  | 0050  | 0535  | 1030  |
| 16.24 | 14.97 | 14.87 | 14.01 | 13.67 |
| 16.23 | 14.96 | 14.80 | 14.06 | 14.01 |
| 16.23 | 14.97 | 14.80 | 14.07 | 13.89 |
| 16.22 | 14.92 | 14.78 | 14.05 | 13.98 |
| 15.70 | 13.95 | 14.82 | 14.00 | 13.45 |
| 14.85 | 14.05 | 15.05 | 10.15 | 9.95  |
| 3.85  | 10.00 | 9.20  | 6.06  | 6.70  |
| 2.30  | 4.82  | 6.50  | 2.75  | 3.65  |
| 1.32  | 2.81  | 5.64  | 2.59  | 2.84  |
| —     | 1.00  | 2.53  | 1.32  | —     |
| —     | 0.85  | 2.55  | 1.30  | —     |
| —     | 0.48  | 0.69  | 0.75  | —     |
| —     | 0.37  | 0.60  | 0.60  | —     |
| —     | —     | 0.45  | 0.30  | —     |
| —     | —     | 0.42  | 0.22  | —     |
| —     | —     | —     | —     | —     |
| 34.29 | 33.96 | 33.74 | 33.74 | 34.24 |
| 34.25 | 34.03 | 34.04 | 34.09 | 34.11 |
| 34.26 | 34.06 | 34.01 | 34.10 | 34.11 |
| 34.28 | 34.95 | 34.06 | 34.12 | 34.14 |
| 34.81 | 34.07 | 34.09 | 34.09 | 34.12 |
| 34.73 | 34.06 | 34.00 | 34.44 | 34.58 |
| 34.37 | 34.26 | 34.50 | 34.44 | 34.44 |
| 34.35 | 34.43 | 34.36 | 34.27 | 34.28 |
| 34.20 | 34.36 | 34.29 | 34.27 | 34.22 |
| —     | 34.34 | 34.21 | 34.38 | —     |
| —     | 34.34 | 34.22 | 34.32 | —     |
| —     | 34.28 | 34.26 | 34.35 | —     |
| —     | 34.31 | 34.24 | 34.32 | —     |
| —     | 34.32 | 34.28 | 34.36 | —     |
| —     | —     | 34.28 | 34.36 | —     |
| —     | —     | —     | —     | —     |
| 185   | —     | —     | —     | 220   |
| 17    | 19    | —     | —     | 13    |
| 3     | 2     | —     | —     | 3     |
| 2     | 3     | 3     | 4     | 6     |
| 2     | 3     | 3     | 3     | 3     |
| 10.0  | 8.9   | 11.9  | 12.2  | 12.5  |
| 1016  | 1016  | 1018  | 1017  | 1017  |
| W. 4  | W. 6  | W. 7  | W. 6  | W. 9  |
| As. 8 | Cu. 3 | Cu. 1 | Cs. 5 | Ci. 3 |
| C     | BC    | B     | BC    | BC    |



남 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS  
SOUTHERN WATERS

1 9 6 5





## 209선 해양관측성적

Oceanographic Data, Line 209

| Date           |       | ① March |       |       |       |       |       |
|----------------|-------|---------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04      | 05    | 06    | 07    | 08    | 09    |
| Day            |       | 2       | 2     | 2     | 2     | 2     | 2     |
| Item           | Time  | 0640    | 0735  | 0900  | 1030  | 1235  | 1440  |
|                | Z(m)  |         |       |       |       |       |       |
| T<br>°C        | 0     | 12.58   | 13.58 | 14.00 | 13.60 | 12.60 | 13.70 |
|                | 10    | 12.15   | 13.34 | 13.65 | 12.64 | 12.15 | 13.19 |
|                | 25    | 11.80   | 13.55 | 13.85 | 13.27 | 12.27 | 13.00 |
|                | 50    | 11.31   | 12.60 | 13.73 | 13.27 | 12.32 | 13.01 |
|                | 100   | —       | 3.27  | 13.21 | 12.91 | 11.20 | 12.29 |
|                | 150   | —       | —     | 2.92  | 4.70  | 3.37  | 8.53  |
|                | 200   | —       | —     | 1.77  | 2.08  | 1.75  | 1.63  |
|                | 300   | —       | —     | 0.91  | 1.21  | 1.02  | 0.85  |
|                | Botm. | 10.84   | 2.26  | —     | —     | —     | —     |
| S<br>‰         | 0     | 34.60   | 34.67 | 34.69 | 34.69 | 34.60 | 34.69 |
|                | 10    | 34.51   | 34.67 | 34.69 | 34.61 | 34.60 | 34.69 |
|                | 25    | 34.51   | 34.65 | 34.69 | 34.61 | 34.58 | 34.69 |
|                | 50    | 34.51   | 34.49 | 34.61 | 34.61 | 34.61 | 34.60 |
|                | 100   | —       | 33.98 | 34.58 | 34.58 | 34.42 | 34.51 |
|                | 150   | —       | —     | 33.98 | 34.05 | 34.05 | 34.29 |
|                | 200   | —       | —     | 34.00 | 33.98 | 34.09 | 33.98 |
|                | 300   | —       | —     | 34.00 | 34.04 | 34.00 | 34.07 |
|                | Botm. | 34.43   | 33.98 | —     | —     | —     | —     |
| Depth (m)      |       | 60      | 145   | —     | —     | —     | —     |
| Secchi (m)     |       | —       | 11    | 15    | 16    | 21    | 20    |
| Color          |       | —       | —     | —     | —     | —     | —     |
| Sea            |       | 1       | 1     | 2     | 2     | 1     | 1     |
| Swell          |       | 1       | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |       | 5.5     | 5.9   | 6.8   | 7.0   | 7.1   | 8.9   |
| Baro. (mm)     |       | —       | —     | —     | —     | —     | —     |
| Wind           |       | N. 1    | N. 1  | N. 1  | N. 1  | N. 1  | N. 1  |
| Cloud          |       | As. 9   | As. 9 | Cs. 9 | Cs. 9 | Cc. 5 | Cc. 4 |
| Weather        |       | C       | C     | C     | C     | BC    | BC    |

| Date           |       | ② April |       |       |       |       |       |
|----------------|-------|---------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04      | 05    | 06    | 07    | 08    | 09    |
| Day            |       | 22      | 22    | 22    | 22    | 22    | 22    |
| Item           | Time  | 0500    | 0600  | 0720  | 0850  | 1100  | 1305  |
|                | Z m   |         |       |       |       |       |       |
| T              | 0     | 12.10   | 13.40 | 13.80 | 14.10 | 13.50 | 13.50 |
|                | 10    | 12.11   | 13.41 | 13.76 | 14.20 | 13.50 | 13.60 |
|                | 20    | —       | —     | —     | —     | —     | —     |
|                | 25    | 12.12   | 13.18 | 13.37 | 14.20 | 13.48 | 13.52 |
|                | 30    | —       | —     | —     | —     | —     | —     |
| °C             | 50    | 10.95   | 11.66 | 12.19 | 13.18 | 13.48 | 13.50 |
|                | 75    | —       | —     | —     | —     | —     | —     |
|                | 100   | —       | 4.97  | 8.94  | 12.67 | 12.68 | 13.09 |
|                | 150   | —       | —     | 3.13  | 6.04  | 8.93  | 11.97 |
|                | 200   | —       | —     | 1.00  | 1.69  | 2.04  | 2.05  |
|                | 250   | —       | —     | —     | —     | —     | —     |
|                | 300   | —       | —     | 0.96  | 0.97  | 0.94  | 1.56  |
|                | Botm. | —       | 1.81  | —     | —     | —     | —     |
| S              | 0     | 34.60   | 34.67 | 34.69 | 34.65 | 34.76 | 34.78 |
|                | 10    | 34.58   | 34.65 | 34.67 | 34.65 | 34.67 | 34.74 |
|                | 20    | —       | —     | —     | —     | —     | —     |
|                | 25    | 34.58   | 34.67 | 34.67 | 34.58 | 34.67 | 34.65 |
|                | 30    | —       | —     | —     | —     | —     | —     |
| ‰              | 50    | 34.51   | 34.49 | 34.52 | 34.58 | 34.63 | 34.63 |
|                | 75    | —       | —     | —     | —     | —     | —     |
|                | 100   | —       | 34.07 | 34.42 | 34.58 | 34.61 | 34.61 |
|                | 150   | —       | —     | 34.05 | 34.24 | 34.40 | 34.56 |
|                | 200   | —       | —     | 34.02 | 34.04 | 33.96 | 34.05 |
|                | 250   | —       | —     | —     | —     | —     | —     |
|                | 300   | —       | —     | 33.98 | 33.96 | 33.91 | 33.96 |
|                | Botm. | —       | 34.04 | —     | —     | —     | —     |
| Depth (m)      |       | 56      | 160   | —     | —     | —     | 220   |
| Secchi (mm)    |       | —       | —     | —     | 14    | 14    | 14    |
| Color          |       | —       | —     | —     | —     | —     | —     |
| Sea            |       | 2       | 2     | 2     | 2     | 2     | 2     |
| Swell          |       | 2       | 2     | 1     | 1     | 1     | 2     |
| Air Temp. (°C) |       | 9.8     | 10.6  | 10.8  | 11.8  | 12.0  | 12.5  |
| Baro. (mm)     |       | —       | —     | —     | —     | —     | —     |
| Wind           |       | NE. 1   | NE. 2 | NE. 1 | NE. 1 | E. 1  | NE. 8 |
| Cloud          |       | Ci. 3   | St. 3 | As. 9 | As. 8 | Ac. 8 | Cc. 9 |
| Weather        |       | BC      | B     | C     | C     | C     | C     |

| ③ June |       |       |       |       |
|--------|-------|-------|-------|-------|
| 04     | 05    | 06    | 07    | 08    |
| 9      | 9     | 9     | 9     | 9     |
| 0545   | 0635  | 0755  | 0920  | 1120  |
| 17.00  | 17.5  | 18.3  | 18.5  | 17.7  |
| 15.4   | 16.8  | 18.0  | 18.2  | 16.7  |
| 13.6   | 15.2  | 17.9  | 18.1  | 16.4  |
| —      | —     | —     | —     | —     |
| 11.8   | 13.9  | 16.5  | 17.6  | 15.7  |
| 7.3    | 10.0  | 14.9  | 15.4  | 15.4  |
| —      | 3.6   | 13.8  | 14.6  | 14.3  |
| —      | 2.5   | 13.4  | 13.8  | 13.6  |
| —      | —     | 4.8   | 7.2   | 11.3  |
| —      | —     | 1.8   | 2.4   | 6.0   |
| —      | —     | 1.6   | 2.1   | 2.6   |
| —      | —     | —     | —     | —     |
| 5.9    | 2.2   | —     | —     | —     |
| 34.70  | 34.72 | 34.69 | 34.58 | 34.74 |
| 34.70  | 34.60 | 34.76 | 34.78 | 34.79 |
| 34.78  | 34.78 | 34.63 | 34.60 | 34.83 |
| —      | —     | —     | —     | —     |
| 34.61  | 34.85 | 34.78 | 34.78 | 34.83 |
| 34.60  | 34.58 | 34.87 | 34.87 | 34.76 |
| —      | 34.34 | 34.96 | 34.89 | 34.96 |
| —      | 34.25 | 34.80 | 34.87 | 35.07 |
| —      | —     | 34.43 | 34.49 | 34.72 |
| —      | —     | 34.36 | 34.31 | 34.52 |
| —      | —     | 34.43 | 34.38 | 34.29 |
| —      | —     | —     | —     | —     |
| 34.60  | 34.31 | —     | —     | —     |
| 65     | 139   | —     | —     | —     |
| 13     | 14    | 17    | 16    | 21    |
| —      | —     | —     | —     | —     |
| 1      | 2     | 3     | 3     | 3     |
| 1      | 2     | 2     | 2     | 2     |
| 14.9   | 17.0  | 17.5  | 17.9  | —     |
| 774    | 774   | 775   | 775   | 775   |
| NE. 1  | NE. 2 | NE. 3 | NE. 3 | NE. 3 |
| St. 3  | St. 3 | Cc. 3 | St. 2 | St. 4 |
| BC     | BC    | BC    | B     | BC    |

| Date           |       | ④ August |        |        |        |       |       |       |       |       |
|----------------|-------|----------|--------|--------|--------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04       | 05     | 06     | 07     | 08    | 09    | 10    | 11    | 12    |
| Day            |       | 17       | 17     | 17     | 17     | 17    | 17    | 17    | 18    | 18    |
| Item           | Time  | 0730     | 0840   | 1050   | 1345   | 1700  | 1935  | 2155  | 0020  | 0215  |
|                | Z(m)  |          |        |        |        |       |       |       |       |       |
| T<br>°C        | 0     | 21.47    | 16.46  | 22.71  | 12.80  | 26.95 | 26.15 | 26.65 | 26.60 | 26.60 |
|                | 10    | 17.49    | 15.04  | 19.81  | 23.50  | 25.21 | 25.32 | 24.84 | 25.27 | 25.45 |
|                | 20    | 14.59    | 14.63  | 18.09  | 20.49  | 20.78 | 24.39 | 23.75 | 23.59 | 23.62 |
|                | 30    | 13.21    | 13.99  | 14.65  | 18.92  | 19.39 | 21.57 | 22.64 | 22.06 | 21.28 |
|                | 50    | —        | 11.57  | 12.12  | 14.31  | 15.41 | 18.48 | 19.14 | 18.70 | 18.77 |
|                | 75    | —        | 10.07  | 8.10   | 14.32  | 4.30  | 17.25 | 19.68 | 16.84 | 17.25 |
|                | 100   | —        | 10.00  | 7.06   | 7.21   | 2.17  | 7.36  | 15.17 | 15.70 | 16.50 |
|                | 125   | —        | —      | 4.33   | —      | 1.89  | —     | —     | —     | —     |
|                | 150   | —        | —      | 1.64   | —      | 1.78  | —     | —     | —     | —     |
|                | 200   | —        | —      | 0.44   | —      | 1.70  | —     | —     | —     | —     |
|                | Botm. | 11.10    | 9.30   | 1.16   | 4.35   | 1.68  | 5.10  | 9.73  | —     | —     |
| S<br>‰         | 0     | 33.55    | 33.02  | 32.80  | 32.27  | 31.26 | 31.92 | 31.72 | 32.13 | 31.57 |
|                | 10    | 33.82    | 34.05  | 32.33  | 32.33  | 31.74 | 32.42 | 32.15 | 32.32 | 31.99 |
|                | 20    | 34.04    | 34.39  | 33.55  | 33.48  | 33.45 | 32.76 | 32.57 | 32.83 | 32.90 |
|                | 30    | 34.23    | 34.40  | 34.40  | 33.94  | 33.88 | 33.39 | 33.08 | 33.33 | 33.74 |
|                | 50    | —        | 34.44  | 34.51  | 34.37  | 34.49 | 34.25 | 34.24 | 34.38 | 34.34 |
|                | 75    | —        | 34.37  | 34.30  | 34.49  | 34.22 | 34.52 | 34.52 | 34.55 | 34.45 |
|                | 100   | —        | 34.19  | 34.17  | 34.33  | 34.12 | 34.54 | 34.52 | 34.66 | 34.44 |
|                | 125   | —        | —      | 34.16  | —      | 14.11 | —     | —     | —     | —     |
|                | 150   | —        | —      | 34.18  | —      | 34.11 | —     | —     | —     | —     |
|                | 200   | —        | —      | 34.14  | —      | 34.11 | —     | —     | —     | —     |
|                | Botm. | 34.31    | 34.13  | 34.12  | 34.18  | 34.12 | 34.33 | 34.47 | 34.53 | 34.49 |
| Depth (m)      |       | 58       | 135    | 242    | 125    | 238   | 150   | 140   | 120   | 118   |
| Secchi (m)     |       | 11       | 12     | 11     | 19     | 19    | —     | —     | —     | —     |
| Color          |       | 4        | 5      | 5      | 2      | 2     | —     | —     | —     | —     |
| Sea            |       | —        | —      | —      | —      | —     | —     | —     | —     | —     |
| Swell          |       | —        | —      | —      | —      | —     | —     | —     | —     | —     |
| Air Temp. (°C) |       | 25.3     | 24.0   | 24.1   | 26.0   | 27.5  | 27.0  | 26.5  | 27.0  | 27.0  |
| Baro. (mm)     |       | 1015     | 1015   | 1015   | 1011   | 1015  | 1015  | 1016  | 1016  | 1016  |
| Wind           |       | SW. 2    | SSW. 4 | SSW. 5 | SSW. 7 | SW. 4 | SW. 3 | SW. 1 | S. 1  | S. 4  |
| Cloud          |       | Cu. 8    | Ci. 8  | Cc. 9  | Cc. 9  | Ci. 6 | Ci. 1 | 0     | 0     | 0     |
| Weather        |       | C        | C      | C      | C      | BC    | B     | B     | B     | B     |

| ⑤ September |       |       |       |       | ⑥ October |       |       |       |       |       |       |
|-------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|-------|
| 01          | 02    | 03    | 04    | 05    | 04        | 05    | 06    | 07    | 08    | 09    | 10    |
| 26          | 26    | 26    | 26    | 26    | 11        | 11    | 11    | 11    | 11    | 12    | 12    |
| 0605        | 0655  | 0830  | 1000  | 1200  | 1305      | 1445  | 1545  | 1735  | 2040  | 0125  | 0320  |
| 21.50       | 22.00 | 22.10 | 23.50 | 24.00 | 21.30     | 21.70 | 22.50 | 23.20 | 22.10 | 22.50 | 22.60 |
| 21.85       | 22.80 | 21.92 | 23.03 | 23.32 | 20.58     | 21.12 | 22.03 | 23.48 | 21.96 | 22.19 | 22.62 |
| 21.04       | 23.14 | 22.08 | 23.48 | 23.64 | 20.23     | 19.95 | 22.22 | 23.37 | 22.22 | 22.28 | 22.25 |
| 18.07       | 19.32 | 19.42 | 21.70 | 24.49 | 15.65     | 17.69 | 20.63 | 23.26 | 22.32 | 22.31 | 22.48 |
| 12.04       | 12.36 | 11.58 | 16.51 | 20.01 | —         | 15.43 | 15.56 | 23.01 | 20.22 | 19.02 | 19.09 |
| —           | 4.69  | 6.56  | 15.17 | 15.91 | —         | 12.53 | 15.53 | 16.28 | 16.59 | 17.41 | 16.50 |
| —           | —     | 4.14  | 10.80 | 15.12 | —         | 6.86  | 8.63  | 15.91 | 14.91 | 15.64 | 13.93 |
| —           | —     | —     | —     | —     | —         | —     | 1.70  | 2.70  | 5.93  | 13.09 | —     |
| —           | —     | 1.39  | 3.27  | 4.45  | —         | —     | 4.19  | 1.29  | 2.68  | —     | —     |
| —           | —     | —     | 1.58  | 1.86  | —         | —     | 0.76  | 0.89  | 1.00  | —     | —     |
| —           | 3.55  | —     | —     | —     | 6.10      | 4.43  | —     | —     | —     | 0.87  | 6.95  |
| 32.55       | 32.75 | 31.96 | 33.20 | 32.98 | 32.23     | 32.32 | 33.96 | 33.20 | 33.87 | 33.18 | 33.10 |
| 32.49       | 32.76 | 32.54 | 33.23 | 33.06 | 32.19     | 33.44 | 33.96 | 33.94 | 33.75 | 33.47 | 33.13 |
| 32.51       | 33.18 | 32.37 | 33.32 | 33.09 | 32.35     | 32.48 | 32.86 | 34.04 | 33.96 | 33.47 | 33.14 |
| 33.53       | 33.24 | 33.22 | 33.31 | 32.99 | 33.44     | 32.97 | 32.90 | 33.51 | 32.94 | —     | 33.15 |
| 34.53       | 34.53 | 34.44 | 33.70 | 34.43 | —         | 34.14 | 34.28 | 32.89 | 33.34 | 33.43 | 33.23 |
| —           | 34.29 | 34.31 | 34.58 | 34.63 | —         | 34.18 | 33.96 | 32.98 | 34.01 | —     | 33.80 |
| —           | —     | 34.26 | 34.53 | 34.33 | —         | 34.12 | 34.17 | 34.39 | 34.27 | 34.29 | 34.17 |
| —           | —     | —     | —     | —     | —         | —     | 32.34 | 34.92 | 34.04 | 34.34 | —     |
| —           | —     | 34.24 | 34.26 | 34.25 | —         | —     | 34.38 | 33.96 | 32.77 | —     | —     |
| —           | —     | 34.27 | 34.27 | 34.25 | —         | —     | 33.98 | 33.50 | 33.13 | 34.05 | 34.31 |
| —           | 34.27 | —     | —     | —     | 34.05     | 34.04 | —     | —     | —     | —     | —     |
| 55          | 130   | —     | —     | —     | —         | —     | —     | —     | —     | —     | 158   |
| —           | —     | 16    | 17    | 18    | 11        | 11    | 16    | 17    | —     | —     | —     |
| —           | —     | —     | —     | —     | —         | —     | —     | —     | —     | —     | —     |
| —           | 1     | 3     | 1     | 1     | 2         | 2     | 2     | 1     | 1     | 3     | 3     |
| 1           | 2     | 2     | 2     | 2     | —         | 1     | 1     | 2     | 1     | 2     | 2     |
| —           | 19.3  | 21.0  | 21.5  | 20.0  | 22.0      | 22.0  | 22.2  | 20.0  | 20.9  | 20.5  | 20.6  |
| —           | —     | —     | —     | —     | 767       | 767   | —     | —     | 767   | 769   | 769   |
| N. 2        | —     | —     | SW. 2 | S. 2  | —         | E. 2  | E. 2  | E. 1  | E. 2  | E. 3  | E. 3  |
| Ci. 2       | Ci. 3 | Ci. 3 | Ci. 2 | Ci. 3 | Ci. 3     | Ci. 3 | —     | Ci. 3 | —     | As. 2 | As. 3 |
| B           | BC    | BC    | B     | BC    | BC        | BC    | —     | BC    | —     | B     | BC    |

# 208선 해양관측성적

Oceanographic Data, Line 208

| Date           |              | ① January |       |       |       |       | ② March |       |       |
|----------------|--------------|-----------|-------|-------|-------|-------|---------|-------|-------|
| Sta. No.       |              | 01        | 02    | 03    | 04    | 05    | 01      | 02    | 03    |
| Day            |              | 17        | 17    | 17    | 17    | 17    | 3       | 3     | 3     |
| Item           | Time<br>Z(m) | 0830      | 0940  | 1115  | 1240  | 1405  | 1350    | 1230  | 1100  |
| T<br>°C        | 0            | 14.05     | 14.88 | 14.95 | 14.96 | 15.08 | 13.05   | 13.80 | 13.95 |
|                | 10           | 13.98     | 14.94 | 14.92 | 14.91 | 15.60 | 12.49   | 12.28 | 13.58 |
|                | 25           | 13.95     | 15.00 | 15.02 | 14.96 | 15.70 | 12.85   | 13.75 | 13.82 |
|                | 50           | 13.93     | 14.03 | 14.21 | 15.00 | 15.70 | 12.72   | 13.77 | 14.00 |
|                | 100          | —         | 10.69 | 13.26 | 14.97 | 15.35 | —       | 13.50 | 13.80 |
|                | Botm.        | 13.95     | 8.01  | 9.74  | 14.85 | 13.52 | 12.21   | 8.20  | 13.22 |
| S<br>‰         | 0            | 34.29     | 34.42 | 34.56 | 34.52 | 34.51 | 34.69   | 34.70 | 34.72 |
|                | 10           | 34.33     | 34.49 | 34.51 | 34.51 | 34.60 | 34.67   | 34.69 | 34.69 |
|                | 25           | 34.49     | 34.51 | 34.51 | 34.47 | 34.60 | 34.67   | 34.60 | 34.69 |
|                | 50           | 34.51     | 34.33 | 34.43 | 34.45 | 34.58 | 34.65   | 34.69 | 34.61 |
|                | 100          | —         | 34.34 | 34.24 | 34.45 | 34.52 | —       | 34.67 | 34.76 |
|                | Botm.        | 34.51     | 34.22 | 34.24 | 34.42 | 34.49 | 34.65   | 34.61 | 34.61 |
| Depth (m)      |              | 64        | 115   | 135   | 135   | 144   | 65      | 112   | 135   |
| Secchi (m)     |              | 7         | 17    | 21    | 22    | 22    | 9       | 10    | 13    |
| Color          |              | —         | 4     | 4     | 4     | —     | —       | —     | —     |
| Sea            |              | 2         | 2     | 2     | 2     | 1     | 3       | 3     | 2     |
| Swell          |              | 1         | 1     | 1     | 1     | 1     | 2       | 2     | 2     |
| Air Temp. (°C) |              | 1.7       | 5.0   | 5.5   | 6.3   | 7.5   | 9.4     | 9.4   | 9.2   |
| Baro. (mm)     |              | —         | —     | —     | —     | —     | —       | —     | —     |
| Wind           |              | NW. 2     | NE. 2 | NE. 2 | NE. 2 | NE. 1 | N. 3    | N. 3  | N. 2  |
| Cloud          |              | Cu. 2     | Cu. 9 | Ac. 6 | Ac. 7 | Ac. 5 | 0       | 0     | 0     |
| Weather        |              | B         | C     | BC    | BC    | BC    | B       | B     | B     |



|       |       |       | ③ April |        |        |        |        |        |
|-------|-------|-------|---------|--------|--------|--------|--------|--------|
| 04    | 05    | 06    | 01      | 02     | 03     | 04     | 05     | 06     |
| 3     | 2     | 2     | 23      | 22     | 22     | 22     | 22     | 22     |
| 0930  | 2205  | 2035  | 0150    | 2355   | 2235   | 2100   | 1943   | 1810   |
| 13.64 | 12.90 | 13.83 | 13.40   | 13.80  | 14.50  | 13.70  | 13.80  | 13.70  |
| 13.51 | 12.66 | 13.65 | 13.20   | 13.74  | 14.70  | 13.82  | 13.78  | 13.90  |
| 13.57 | 13.06 | 13.72 | 12.43   | 13.40  | 14.49  | 13.78  | 13.67  | 13.90  |
| 13.59 | 12.93 | 13.67 | 11.93   | 12.08  | 14.24  | 13.70  | 13.59  | 13.81  |
| 13.41 | 12.70 | 13.51 | —       | —      | 13.55  | 13.50  | 13.05  | 13.73  |
| 13.21 | 11.61 | 13.57 | 8.09    | 6.23   | 13.40  | 12.89  | 13.05  | 13.60  |
| 34.69 | 34.67 | 34.70 | 34.65   | 34.70  | 34.74  | 34.74  | 34.76  | 34.63  |
| 34.69 | 34.69 | 34.72 | 34.65   | 34.69  | 34.74  | 34.74  | 34.74  | 34.63  |
| 34.69 | 34.61 | 34.69 | 34.58   | 34.67  | 34.67  | 34.72  | 34.74  | 34.63  |
| 34.60 | 34.60 | 34.69 | 34.31   | 34.67  | 34.67  | 34.72  | 34.69  | 34.56  |
| 34.69 | 34.52 | 34.69 | —       | —      | 34.67  | 34.67  | 34.69  | 34.56  |
| 34.63 | 34.60 | 34.69 | 34.31   | 34.31  | 34.65  | 34.60  | 34.65  | 34.56  |
| 145   | 150   | 129   | 65      | 108    | 136    | 136    | 126    | 124    |
| 19    | —     | —     | —       | —      | —      | —      | —      | —      |
| —     | —     | —     | —       | —      | —      | —      | —      | —      |
| 1     | 2     | 2     | 2       | 2      | 3      | 3      | 2      | 3      |
| 1     | 1     | 1     | 2       | 1      | 1      | 2      | 1      | 1      |
| 9.1   | 8.6   | 9.5   | 13.8    | 13.5   | 13.3   | 13.5   | 13.5   | 13.5   |
| —     | —     | —     | —       | —      | —      | —      | —      | —      |
| N. 1  | N. 1  | N. 1  | SE. 2   | SE. 2  | SE. 2  | SE. 2  | SE. 2  | SE. 2  |
| 0     | Cs. 2 | Cs. 2 | Nb. 10  | Nb. 10 | St. 10 | St. 10 | St. 10 | St. 10 |
| B     | B     | B     | R       | R      | C      | C      | C      | C      |

| Date           |              | ④ May |       |       |       |       |       |
|----------------|--------------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 01    | 02    | 03    | 04    | 05    | 06    |
| Day            |              | 7     | 7     | 7     | 7     | 7     | 7     |
| Item           | Time<br>Z(m) | 0629  | 0700  | 0845  | 1010  | 1145  | 1338  |
| T<br>℃         | 0            | 13.4  | 14.0  | 15.4  | 15.05 | 15.6  | 15.9  |
|                | 10           | 13.07 | 14.03 | 14.40 | 15.60 | 15.71 | 15.39 |
|                | 25           | 12.48 | 13.97 | 15.66 | 15.39 | 15.49 | 14.77 |
|                | 50           | 11.80 | 13.88 | 14.37 | 15.19 | 15.25 | 14.55 |
|                | 100          | —     | 11.68 | 13.18 | 13.88 | 14.01 | 14.02 |
|                | Botm.        | 10.13 | 11.20 | 13.13 | 13.23 | 13.81 | 14.06 |
| S<br>‰         | 0            | 34.45 | 34.52 | 34.54 | 34.60 | 34.61 | 34.67 |
|                | 10           | 34.45 | 34.54 | 34.58 | 34.60 | 34.61 | 34.67 |
|                | 25           | 34.47 | 34.51 | 34.60 | 34.60 | 34.63 | 34.67 |
|                | 50           | 34.49 | 34.51 | 34.61 | 34.63 | 34.63 | 34.67 |
|                | 100          | —     | 34.51 | 34.63 | 34.74 | 34.70 | 34.67 |
|                | Botm.        | 34.49 | 34.51 | 34.65 | 34.74 | 34.70 | 34.67 |
| Depth (m)      |              | 65    | 118   | 138   | 140   | 135   | 125   |
| Secchi (m)     |              | —     | 6     | 5     | 8     | 8     | 11    |
| Color          |              | —     | —     | —     | —     | —     | —     |
| Sea            |              | 1     | 1     | 3     | 3     | 2     | 1     |
| Swell          |              | 1     | 1     | 2     | 2     | 2     | 1     |
| Air Temp. (°C) |              | 13.0  | 15.5  | 15.5  | —     | 16.4  | 16.5  |
| Baro. (mm)     |              | —     | —     | —     | —     | —     | —     |
| Wind           |              | S. 5  | S. 1  | S. 1  | S. 3  | S. 3  | S. 2  |
| Cloud          |              | Ci. 2 | Ci. 1 | 0     | As. 1 | Ci. 1 | 0     |
| Weather        |              | B     | B     | B     | B     | B     | B     |

| Date           |              | (5) June |       |       |       |       |       |
|----------------|--------------|----------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 01       | 02    | 03    | 04    | 05    | 06    |
| Day            |              | 8        | 8     | 8     | 8     | 8     | 8     |
| Item           | Time<br>Z(m) | 0615     | 0715  | 0910  | 1025  | 1200  | 1330  |
| T<br><br>°C    | 0            | 17.5     | 18.2  | 17.2  | 18.1  | 18.5  | 18.4  |
|                | 10           | 17.08    | 18.07 | 18.40 | 17.98 | 18.53 | 18.46 |
|                | 20           | —        | 18.02 | 18.40 | 17.94 | 18.34 | 17.80 |
|                | 30           | 14.33    | 14.70 | 18.39 | 17.83 | 15.83 | 16.75 |
|                | 50           | 15.34    | 13.87 | 16.88 | 16.55 | 16.35 | 15.58 |
|                | 75           | —        | 11.39 | 15.01 | 15.28 | 15.45 | 14.99 |
|                | 100          | —        | —     | 14.56 | 14.83 | 15.68 | 14.85 |
|                | 125          | —        | —     | —     | —     | —     | —     |
|                | Botm.        | 13.83    | —     | 5.46  | 14.09 | 14.87 | 14.55 |
| S<br><br>‰     | 0            | 34.32    | 34.34 | 34.37 | 34.45 | 34.44 | 34.43 |
|                | 10           | 34.32    | 34.34 | 34.36 | 34.42 | 34.45 | 34.44 |
|                | 20           | 34.41    | 34.36 | 34.34 | 34.42 | 34.48 | 34.44 |
|                | 30           | 34.55    | 34.52 | 34.37 | 34.42 | 34.49 | 34.47 |
|                | 50           | 34.39    | 34.61 | 34.41 | 34.43 | 34.55 | 34.62 |
|                | 75           | —        | 34.60 | 34.54 | 34.54 | 34.63 | 34.67 |
|                | 100          | —        | 34.47 | 34.47 | 34.60 | 34.60 | 34.67 |
|                | 125          | —        | —     | —     | —     | —     | —     |
|                | Botm.        | 34.52    | 34.47 | 34.45 | 34.70 | 34.68 | 34.76 |
| Depth (m)      |              | 60       | 110   | 140   | 140   | 140   | 120   |
| Secchi (m)     |              | 11       | 160   | 17    | 19    | 19    | 19    |
| Color          |              | —        | —     | —     | —     | —     | —     |
| Sea            |              | 1        | 1     | 1     | 4     | 4     | —     |
| Swell          |              | —        | 1     | 1     | 2     | 2     | —     |
| Air Temp. (°C) |              | 16.5     | 16.9  | 17.1  | 15.0  | 17.2  | 17.0  |
| Baro. (mm)     |              | —        | —     | —     | —     | —     | —     |
| Wind           |              | ENE. 2   | NE. 3 | NE. 3 | NE. 3 | NE. 3 | NE. 3 |
| Cloud          |              | Cu. 3    | Ac. 2 | Ac. 2 | Ac. 4 | Ac. 6 | 0     |
| Weather        |              | B        | B     | B     | BC    | BC    | B     |

| Date           |              | ⑥ August |        |       |       |       |       |        |
|----------------|--------------|----------|--------|-------|-------|-------|-------|--------|
| Sta. No.       |              | 01       | 02     | 03    | 04    | 05    | 06    | 07     |
| Day            |              | 16       | 16     | 15    | 15    | 15    | 15    | 15     |
| Item           | Time<br>Z(m) | 0150     | 0037   | 2300  | 2105  | 1915  | 1702  | 1510   |
| T<br>°C        | 0            | 20.92    | 21.99  | 21.61 | 24.53 | 26.62 | 27.22 | 26.83  |
|                | 10           | 16.83    | 20.49  | 19.27 | 23.59 | 25.86 | 25.80 | 25.17  |
|                | 20           | 15.23    | 17.57  | 16.97 | 18.64 | 23.34 | 24.86 | 22.34  |
|                | 30           | 14.32    | 16.11  | 15.56 | 16.21 | 19.35 | 22.23 | 19.55  |
|                | 50           | 12.95    | 15.12  | 14.26 | 14.97 | 17.88 | 18.00 | 17.32  |
|                | 75           | —        | 9.66   | 12.28 | 14.10 | 15.54 | 16.48 | 16.03  |
|                | 100          | —        | —      | 3.89  | 9.00  | 15.20 | 15.43 | 15.35  |
|                | 175          | —        | —      | —     | —     | —     | —     | —      |
|                | Botm.        | 10.23    | 5.03   | 3.58  | 3.26  | 13.41 | 13.77 | 12.34  |
| S<br>‰         | 0            | 32.84    | 32.88  | 33.13 | 31.91 | 34.16 | 30.85 | 32.31  |
|                | 10           | 32.80    | 32.99  | 33.34 | 32.20 | 31.36 | 31.21 | 32.61  |
|                | 20           | 34.26    | 33.63  | 33.94 | 34.41 | 32.85 | 32.12 | 33.32  |
|                | 30           | 34.30    | 34.19  | 34.22 | 33.99 | 33.71 | 33.04 | 34.11  |
|                | 50           | 34.34    | 34.54  | 34.30 | 34.47 | 34.19 | 34.06 | 34.40  |
|                | 75           | —        | 34.41  | 34.41 | 34.52 | 34.28 | 34.54 | 34.43  |
|                | 100          | —        | —      | 34.19 | 34.30 | 34.52 | 34.52 | 43.43  |
|                | 125          | —        | —      | —     | 34.20 | —     | —     | —      |
|                | Botm.        | 34.40    | 34.23  | 34.15 | 34.19 | 34.44 | 34.50 | 34.48  |
| Depth (m)      |              | 60       | 100    | 140   | 136   | 121   | 128   | 130    |
| Secchi (m)     |              | —        | —      | —     | —     | —     | —     | —      |
| Color          |              | —        | —      | —     | —     | —     | —     | —      |
| Sea            |              | —        | —      | —     | —     | —     | —     | —      |
| Swell          |              | —        | —      | —     | —     | —     | —     | —      |
| Air Temp. (°C) |              | 23.0     | 22.2   | 23.0  | 25.2  | 26.0  | 28.0  | 27.2   |
| Baro. (mm)     |              | 1011     | 1010   | 1011  | 1012  | 1011  | 1011  | 1011   |
| Wind           |              | SW. 2    | SSW. 4 | SW. 3 | SW. 3 | SW. 3 | SW. 3 | SW. 3  |
| Cloud          |              | 0        | 0      | 0     | 0     | Cu. 8 | Cu. 2 | Cu. 10 |
| Weather        |              | B        | B      | B     | B     | C     | B     | C      |

| Date           |              | ⑦ September |       |       |       |       |       |       |       |       |
|----------------|--------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 08          | 09    | 10    | 01    | 02    | 03    | 04    | 05    | 06    |
| Day            |              | 15          | 15    | 15    | 23    | 23    | 23    | 23    | 22    | 22    |
| Item           | Time<br>Z(m) | 1310        | 1120  | 0925  | 1105  | 0910  | 0230  | 0035  | 2245  | 0910  |
| T<br>°C        | 0            | 26.41       | 26.05 | 26.86 | 22.20 | 21.80 | 24.80 | 28.00 | 23.00 | 22.40 |
|                | 10           | 25.60       | 25.37 | 26.70 | 21.81 | 22.13 | 23.73 | 22.41 | 24.91 | 23.42 |
|                | 20           | 24.15       | 23.77 | 26.58 | 20.90 | 21.22 | 24.74 | 22.53 | 23.20 | 23.27 |
|                | 30           | 20.61       | 23.30 | 26.02 | 15.85 | 17.37 | 24.77 | 14.24 | 13.37 | 23.09 |
|                | 50           | 17.61       | 20.22 | 20.71 | 12.48 | 14.71 | 16.01 | 17.82 | 19.32 | 17.71 |
|                | 75           | 16.12       | 18.60 | 19.04 | —     | 9.15  | 14.58 | 15.31 | 17.57 | 17.14 |
|                | 100          | 15.60       | 16.35 | 17.63 | —     | 5.71  | 7.84  | 15.64 | 15.72 | 15.48 |
|                | 125          | —           | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 150          | —           | —     | —     | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 10.73       | 15.68 | 17.47 | 12.50 | 5.65  | 4.78  | 13.89 | 14.22 | 13.12 |
| S<br>‰         | 0            | 32.54       | 32.05 | 31.20 | 32.67 | 32.73 | 33.78 | 32.53 | 32.56 | 32.51 |
|                | 10           | 32.53       | 32.75 | 31.59 | 32.92 | 32.76 | 33.99 | 32.98 | 32.66 | 32.82 |
|                | 20           | 33.07       | 33.23 | 31.96 | 33.02 | 32.96 | 34.20 | 33.16 | 33.01 | 33.27 |
|                | 30           | 33.94       | 33.44 | 32.26 | 34.00 | 34.80 | 34.22 | 33.73 | 33.16 | 34.22 |
|                | 50           | 34.24       | 34.23 | 33.97 | 34.14 | 34.77 | 35.17 | 33.79 | 34.04 | 34.25 |
|                | 75           | 34.49       | 34.55 | 34.38 | —     | 34.74 | 35.25 | 34.45 | 34.16 | 34.62 |
|                | 100          | 34.55       | 34.44 | 34.45 | —     | 34.72 | 35.08 | 35.65 | 34.93 | 34.93 |
|                | 125          | —           | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 150          | —           | —     | —     | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 34.48       | 34.43 | 34.45 | 34.14 | 34.71 | 34.88 | 35.67 | 35.05 | 34.95 |
| Depth (m)      |              | 136         | 123   | 116   | 65    | 113   | 145   | 150   | 138   | 132   |
| Secchi (m)     |              | —           | —     | —     | —     | —     | —     | —     | —     | —     |
| Color          |              | —           | —     | —     | —     | —     | —     | —     | —     | —     |
| Sea            |              | —           | —     | —     | —     | —     | —     | —     | —     | —     |
| Swell          |              | —           | —     | —     | —     | —     | —     | —     | —     | —     |
| Air Temp. (°C) |              | 27.0        | 27.0  | 27.0  | —     | —     | —     | —     | —     | —     |
| Baro. (mm)     |              | 1012        | 1013  | 1013  | —     | —     | —     | —     | —     | —     |
| Wind           |              | SW. 3       | SW. 4 | SW. 4 | —     | —     | —     | —     | —     | —     |
| Cloud          |              | Cu. 7       | Cu. 7 | Cu. 7 | —     | —     | —     | —     | —     | —     |
| Weather        |              | BC          | BC    | BC    | —     | —     | —     | —     | —     | —     |

| Date           |              | (8) October |       |        |       |       |       |       |
|----------------|--------------|-------------|-------|--------|-------|-------|-------|-------|
| Sta. No.       |              | 01          | 02    | 03     | 04    | 05    | 06    | 07    |
| Day            |              | 7           | 7     | 7      | 7     | 7     | 7     | 7     |
| Item           | Time<br>Z(m) | 0646        | 0812  | 0950   | 1155  | 1345  | 1520  | 1810  |
| T<br>°C        | 0            | 20.28       | 21.22 | 21.82  | 22.32 | 22.32 | 22.32 | 21.62 |
|                | 10           | 21.24       | 21.21 | 22.25  | 22.32 | 22.55 | 22.60 | 21.90 |
|                | 20           | 21.16       | 21.44 | 22.25  | 21.68 | 22.83 | 22.52 | 23.26 |
|                | 30           | 21.18       | 21.26 | 22.16  | 22.02 | 22.90 | 22.59 | 23.19 |
|                | 50           | —           | 16.90 | 18.73  | 18.36 | 18.57 | 20.78 | 22.76 |
|                | 75           | —           | 16.01 | 17.44  | 17.06 | 17.41 | 17.56 | 17.76 |
|                | 100          | —           | 11.69 | 15.43  | 16.78 | 16.93 | 17.18 | —     |
|                | 125          | —           | —     | 5.31   | 15.24 | 19.80 | —     | —     |
|                | 150          | —           | —     | —      | 7.84  | —     | —     | —     |
|                | Botm.        | 6.20        | 4.67  | 1.86   | —     | 11.93 | 16.30 | 16.41 |
| S<br>‰         | 0            | 32.19       | 32.19 | 32.23  | 32.26 | 33.23 | 33.12 | 32.23 |
|                | 10           | 32.17       | 32.14 | 32.23  | 32.27 | 33.25 | 33.16 | 32.20 |
|                | 20           | 32.28       | 32.18 | 32.31  | 32.43 | 33.35 | 33.21 | 33.26 |
|                | 30           | 32.69       | 32.48 | 32.36  | 32.76 | 32.40 | 33.72 | 33.34 |
|                | 50           | —           | 33.97 | 33.71  | 33.17 | 33.60 | 34.32 | 33.58 |
|                | 75           | —           | 34.66 | 33.70  | 34.29 | 34.21 | 34.48 | 33.97 |
|                | 100          | —           | 34.39 | 34.61  | 34.52 | 34.49 | 34.52 | —     |
|                | 125          | —           | —     | 34.26  | 34.56 | 34.63 | —     | —     |
|                | 150          | —           | —     | —      | 34.32 | 34.44 | —     | —     |
|                | Botm.        | 34.23       | 34.19 | 34.16  | —     | 33.22 | 34.55 | 34.40 |
| Depth (m)      |              | 60          | 130   | 145    | 150   | 140   | 130   | 119   |
| Secchi (m)     |              | —           | 11    | 12     | 20    | 18    | 20    | —     |
| Color          |              | —           | —     | —      | —     | —     | —     | —     |
| Sea            |              | 3           | 3     | 3      | 1     | —     | 2     | 2     |
| Swell          |              | 1           | 2     | 2      | 2     | —     | 2     | 2     |
| Air Temp. (°C) |              | 16.4        | 17.3  | 17.9   | 19.5  | 19.7  | 19.6  | 19.6  |
| Baro. (mm)     |              | —           | —     | —      | —     | —     | —     | —     |
| Wind           |              | NW. 2       | NW. 2 | NNW. 2 | N. 1  | NE. 2 | NE2   | NE    |
| Cloud          |              | Cu2         | Cu. 2 | Cc. 2  | Cu. 1 | Cu. 1 | Cu. 4 | Cu. 2 |
| Weather        |              | B           | B     | B      | B     | B     | BC    | B     |



| Date           |              | ⑨ November |       |       |       |       |       |        |
|----------------|--------------|------------|-------|-------|-------|-------|-------|--------|
| Sta. No.       |              | 01         | 02    | 03    | 04    | 05    | 06    | 07     |
| Day            |              | 4          | 4     | 4     | 4     | 4     | 4     | 4      |
| Item           | Time<br>Z(m) | 0640       | 0845  | 1145  | 1350  | 1610  | 1805  | 2005   |
| T<br><br>C     | 0            | 19.02      | 20.22 | 21.22 | 21.32 | 20.42 | 19.52 | 20.02  |
|                | 10           | 17.81      | 20.25 | 21.26 | 21.32 | 20.49 | 20.72 | 20.56  |
|                | 20           | 19.26      | 20.63 | 21.29 | 21.48 | 20.37 | 20.73 | 20.58  |
|                | 30           | 12.99      | 20.45 | 21.31 | 21.52 | 20.61 | 20.74 | 20.38  |
|                | 50           | 9.32       | 16.15 | 21.11 | 21.85 | 20.53 | 20.56 | —      |
|                | 75           | —          | 14.95 | 17.75 | 18.63 | 19.04 | 18.71 | 18.60  |
|                | 100          | —          | 11.38 | 16.07 | 17.75 | 17.70 | 17.34 | 17.36  |
|                | 125          | —          | 12.28 | —     | —     | —     | —     | —      |
|                | 150          | —          | —     | —     | —     | —     | —     | —      |
|                | Botm.        | 8.87       | 12.15 | 9.35  | 12.48 | 12.38 | 16.14 | 16.57  |
| S<br><br>‰     | 0            | 33.40      | 33.39 | 33.96 | 34.06 | 33.72 | 33.72 | 34.67  |
|                | 10           | 34.47      | 33.64 | 34.03 | —     | —     | 33.77 | 33.78  |
|                | 20           | 34.46      | 33.59 | 34.05 | 34.21 | 33.70 | 33.78 | 33.75  |
|                | 30           | —          | 34.38 | 34.10 | —     | 33.71 | 33.71 | —      |
|                | 50           | 34.49      | 34.67 | 34.10 | 34.33 | 33.70 | —     | —      |
|                | 75           | —          | 34.55 | 34.53 | 34.57 | 33.96 | 33.77 | 33.74  |
|                | 100          | —          | 34.29 | 33.71 | 34.56 | 32.81 | 33.55 | 32.89  |
|                | 125          | —          | 34.32 | —     | —     | —     | —     | —      |
|                | 150          | —          | —     | —     | —     | —     | —     | —      |
|                | Botm.        | —          | 34.09 | 34.10 | 34.72 | 33.70 | 34.55 | —      |
| Depth (m)      |              | 65         | 140   | 150   | 150   | 140   | 140   | 130    |
| Secchi (m)     |              | 18.0       | —     | 17.8  | —     | 16.3  | —     | —      |
| Color          |              | —          | —     | —     | —     | —     | —     | —      |
| Sea            |              | —          | —     | —     | —     | —     | —     | —      |
| Swell          |              | —          | —     | —     | —     | —     | —     | —      |
| Air Temp. (°C) |              | 19.5       | 18.6  | 18.7  | 17.7  | 14.98 | 16.5  | 16.7   |
| Baro. (mm)     |              | —          | —     | —     | —     | —     | —     | —      |
| Wind           |              | S. 1       | S. 2  | S. 3  | S. 3  | S. 3  | S. 3  | S. 4   |
| Cloud          |              | Cs. 3      | Cs. 4 | Cs. 5 | Cs. 5 | Cs. 5 | Cs. 5 | Cc. 10 |
| Weather        |              | BC         | BC    | BC    | BC    | BC    | BC    | C      |

| Date           |              | ⑩ December |       |       |       |       |        |
|----------------|--------------|------------|-------|-------|-------|-------|--------|
| Sta. No.       |              | 02         | 03    | 04    | 06    | 08    | 10     |
| Day            |              | 11         | 11    | 11    | 11    | 11    | 11     |
| Item           | Time<br>Z(m) | 2320       | 2125  | 1950  | 1625  | 1325  | 1025   |
| T<br>°C        | 0            | 18.15      | 18.18 | 18.28 | 17.40 | 18.67 | 18.89  |
|                | 10           | 18.16      | 18.25 | 18.29 | 17.49 | 18.65 | 19.00  |
|                | 20           | 18.10      | 18.27 | 18.27 | 17.49 | 18.58 | 19.03  |
|                | 30           | 18.06      | 18.26 | 18.28 | 17.47 | 18.58 | 19.02  |
|                | 50           | 17.72      | 18.22 | 18.26 | 17.46 | 18.56 | 18.87  |
|                | 75           | 16.32      | 17.84 | 18.32 | 17.29 | 18.37 | 18.86  |
|                | 100          | 16.05      | 17.05 | 18.10 | 16.70 | 18.34 | 18.65  |
|                | 125          | —          | —     | 18.75 | —     | —     | —      |
|                | 150          | —          | —     | —     | —     | —     | —      |
|                | Botm.        | 15.03      | 16.90 | 15.70 | 15.99 | 18.10 | 18.70  |
| S<br>‰         | 0            | 34.56      | 34.46 | 34.25 | 34.27 | 34.17 | 34.57  |
|                | 10           | 34.56      | 34.62 | 34.48 | 34.43 | 34.61 | 34.40  |
|                | 20           | 34.58      | 34.62 | 34.43 | 34.42 | 34.60 | 34.54  |
|                | 30           | 34.55      | 34.63 | 34.44 | 34.49 | 34.61 | 34.63  |
|                | 50           | 34.55      | 34.60 | 34.42 | 34.50 | 34.65 | 34.65  |
|                | 75           | 34.34      | 34.57 | 34.52 | 34.45 | 34.64 | 34.67  |
|                | 100          | 34.48      | 34.40 | 34.48 | 34.49 | 34.72 | 34.66  |
|                | 125          | —          | —     | 34.36 | —     | —     | —      |
|                | 150          | —          | —     | —     | —     | —     | —      |
|                | Botm.        | 34.48      | 34.48 | 34.58 | 34.65 | 34.66 | 34.66  |
| Depth (m)      |              | 124        | 140   | 150   | 120   | 128   | 110    |
| Secchi (m)     |              | —          | —     | —     | 9     | 18    | 20     |
| Color          |              | —          | —     | —     | 2     | 3     | 2      |
| Sea            |              | 6          | 6     | 6     | 4     | 4     | 3      |
| Swell          |              | 3          | 3     | 3     | 3     | 3     | 2      |
| Air Temp. (°C) |              | 14.0       | 13.7  | 13.0  | 15.0  | 15.5  | 15.5   |
| Baro. (mm)     |              | 1007       | 1008  | 1009  | 1009  | 1014  | 1013   |
| Wind           |              | W. 6       | W. 9  | W. 10 | SW. 8 | SW. 5 | SW. 6  |
| Cloud          |              | Cl. 1      | Cl. 1 | Cc. 4 | Cc. 4 | Cc. 7 | As. 10 |
| Weather        |              | B          | B     | BC    | BC    | BC    | C      |

# 207선 해양관측성적

## Oceanographic Data, Line 207

| Date           |              | ① January |       |       |       |       | March |       |
|----------------|--------------|-----------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 01        | 02    | 03    | 04    | 05    | 01    | 02    |
| Day            |              | 14        | 14    | 14    | 17    | 17    | 5     | 5     |
| Item           | Time<br>Z(m) | 1128      | 1235  | 1320  | 1925  | 1850  | 2105  | 2010  |
| T<br><br>C     | 0            | 13.2      | 14.9  | 15.2  | 15.10 | 15.15 | 11.91 | 13.21 |
|                | 10           | 13.49     | 14.98 | 15.17 | 14.90 | 15.12 | 11.47 | 12.54 |
|                | 25           | 13.35     | 15.03 | 15.22 | 15.02 | 15.14 | 11.83 | 13.08 |
|                | 50           | 13.14     | 14.43 | 15.22 | 15.05 | 15.13 | 11.79 | 12.81 |
|                | 100          | —         | —     | —     | 15.03 | 15.11 | —     | —     |
|                | 150          | —         | —     | —     | 10.85 | —     | —     | —     |
|                | 200          | —         | —     | —     | 7.40  | —     | —     | —     |
|                | 300          | —         | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 12.68     | 12.89 | 12.50 | 7.22  | 13.08 | 11.63 | 12.32 |
| S<br><br>‰     | 0            | 34.04     | 34.49 | 34.56 | 34.40 | 34.54 | 34.52 | 34.67 |
|                | 10           | 34.04     | 34.49 | 34.56 | 34.60 | 34.51 | 34.51 | 34.67 |
|                | 25           | 34.04     | 34.52 | 34.51 | 34.42 | 34.49 | 34.47 | 34.63 |
|                | 50           | 34.20     | 34.42 | 34.56 | 34.49 | 34.51 | 34.40 | 34.58 |
|                | 100          | —         | —     | 34.16 | 34.51 | 34.47 | —     | —     |
|                | 150          | —         | —     | —     | 34.13 | —     | —     | —     |
|                | 200          | —         | —     | —     | 34.05 | —     | —     | —     |
|                | 300          | —         | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 34.38     | 34.22 | —     | 34.05 | 34.38 | 34.38 | 34.38 |
| Depth (m)      |              | 80        | 92    | 108   | 224   | 156   | 83    | 99    |
| Secchi (m)     |              | 7         | 15    | 13    | —     | —     | —     | —     |
| Color          |              | —         | —     | 5     | —     | —     | —     | —     |
| Sea            |              | 3         | 3     | 3     | 2     | 2     | 3     | 3     |
| Swell          |              | 1         | 2     | 2     | 1     | 1     | 2     | 2     |
| Air Temp. (°C) |              | 2.7       | 3.7   | 3.4   | 9.1   | 9.1   | 5.2   | 7.2   |
| Baro. (mm)     |              | —         | —     | —     | —     | —     | —     | —     |
| Wind           |              | NW. 3     | NW. 3 | NW. 3 | NE. 2 | NE. 2 | NW. 3 | NW. 3 |
| Cloud          |              | Ci. 1     | Ci. 1 | Ci. 1 | Cs. 7 | Cs. 8 | Cs. 6 | Cs. 5 |
| Weather        |              | B         | B     | B     | BC    | C     | BC    | BC    |

| Date           |       | ② March |       |       | ③ May  |        |        |       |       |
|----------------|-------|---------|-------|-------|--------|--------|--------|-------|-------|
| Sta. No.       |       | 03      | 04    | 05    | 01     | 02     | 03     | 04    | 05    |
| Day            |       | 5       | 5     | 5     | 5      | 5      | 5      | 5     | 5     |
| Item           | Time  | 1930    | 1825  | 1735  | 1635   | 1545   | 1500   | 1335  | 1250  |
|                | Z(m)  |         |       |       |        |        |        |       |       |
| T<br>°C        | 0     | 13.53   | 13.52 | 14.16 | 14.5   | 15.5   | 16.0   | 16.7  | 17.0  |
|                | 10    | 13.03   | 12.24 | 13.94 | 13.68  | 15.34  | 15.67  | 16.80 | 17.20 |
|                | 25    | 12.93   | 13.27 | 14.02 | 13.68  | 14.69  | 14.48  | 16.30 | 15.37 |
|                | 50    | 11.89   | 13.56 | 14.11 | 13.63  | 13.77  | 13.11  | 13.97 | 14.01 |
|                | 100   | 11.68   | 12.90 | 12.80 | —      | —      | —      | 13.45 | 13.84 |
|                | 150   | —       | 11.80 | —     | —      | —      | —      | 13.16 | —     |
|                | 200   | —       | 12.00 | —     | —      | —      | —      | 13.00 | —     |
|                | 300   | —       | 12.06 | —     | —      | —      | —      | —     | —     |
|                | Botm. | 11.70   | —     | 12.89 | 13.71  | 12.77  | 12.74  | 13.03 | 13.77 |
| S<br>‰         | 0     | 34.69   | 34.72 | 34.78 | 34.42  | 34.51  | 34.49  | 34.60 | 34.60 |
|                | 10    | 34.69   | 34.69 | 34.76 | 34.49  | 34.51  | 34.51  | 34.51 | 34.51 |
|                | 25    | 34.67   | 34.69 | 34.74 | 34.49  | 34.56  | 34.54  | 34.51 | 34.52 |
|                | 50    | 34.42   | 34.69 | 34.69 | 34.51  | 34.60  | 34.60  | 34.63 | 34.54 |
|                | 100   | 34.38   | 34.61 | 34.58 | —      | —      | —      | 34.63 | 34.60 |
|                | 150   | —       | 34.42 | —     | —      | —      | —      | 34.63 | —     |
|                | 200   | —       | 34.42 | —     | —      | —      | —      | 34.65 | —     |
|                | 300   | —       | —     | —     | —      | —      | —      | —     | —     |
|                | Botm. | 34.38   | 34.36 | 34.58 | 34.52  | 34.60  | 34.60  | 34.65 | 34.60 |
| Depth (m)      |       | 115     | 225   | 115   | 74     | —      | 107    | 220   | 130   |
| Secchi (m)     |       | —       | —     | —     | 3      | —      | 9      | 9     | 9     |
| Color          |       | —       | —     | —     | —      | —      | —      | —     | —     |
| Sea            |       | 3       | 3     | 3     | 2      | 2      | 2      | 2     | 1     |
| Swell          |       | 2       | 1     | 1     | 1      | 1      | —      | 1     | 1     |
| Air Temp. (°C) |       | 6.0     | 6.0   | 5.9   | 16.5   | 16.5   | 16.5   | 16.5  | 16.5  |
| Baro. (mm)     |       | —       | —     | —     | —      | —      | —      | —     | —     |
| Wind           |       | NW. 3   | NW. 3 | NW. 3 | S. 2   | S. 2   | S. 2   | S. 2  | S. 1  |
| Cloud          |       | Cs. 3   | Cs. 8 | Cs. 7 | Cu. 10 | Ac. 10 | As. 10 | Cc. 9 | Cc. 7 |
| Weather        |       | BC      | C     | BC    | C      | C      | C      | C     | BC    |

| Date           |              | ④ June |       |       |        |        |
|----------------|--------------|--------|-------|-------|--------|--------|
| Sta. No.       |              | 01     | 02    | 03    | 04     | 05     |
| Day            |              | 9      | 9     | 9     | 8      | 8      |
| Item           | Time<br>Z(m) | 0355   | 0305  | 0210  | 1938   | 1855   |
| T<br><br>°C    | 0            | 17.9   | 18.2  | 18.81 | 17.5   | 17.7   |
|                | 10           | 18.09  | 18.16 | 18.79 | 18.03  | 17.62  |
|                | 20           | 18.02  | 18.21 | 18.77 | 18.02  | 17.19  |
|                | 30           | 16.08  | 17.95 | 18.88 | 17.90  | 16.02  |
|                | 50           | 14.74  | 14.67 | 14.72 | 16.31  | 16.01  |
|                | 75           | 14.36  | 14.20 | 14.13 | 14.31  | 15.87  |
|                | 100          | —      | —     | 14.17 | 14.25  | 15.35  |
|                | 150          | —      | —     | —     | 14.02  | —      |
|                | 200          | —      | —     | —     | 12.01  | —      |
|                | Botm.        | 14.49  | 34.14 | 14.21 | 11.95  | 14.69  |
| S<br><br>‰     | 0            | 34.32  | 34.32 | 34.20 | 34.29  | 34.30  |
|                | 10           | 34.32  | 34.32 | 34.20 | 34.25  | 34.27  |
|                | 20           | 34.34  | 34.29 | 34.19 | 34.28  | 34.28  |
|                | 30           | 34.38  | 34.30 | 34.15 | 34.62  | 34.32  |
|                | 50           | 34.43  | 34.62 | 34.57 | 34.35  | 34.32  |
|                | 75           | 34.58  | 34.63 | 34.63 | 34.60  | 34.28  |
|                | 100          | —      | —     | 34.63 | 34.61  | 34.23  |
|                | 150          | —      | —     | —     | 34.59  | —      |
|                | 200          | —      | —     | —     | 34.57  | —      |
|                | Botm.        | 34.62  | 34.61 | 34.62 | 34.54  | 34.55  |
| Depth (m)      |              | 83     | 96    | 112   | 220    | 150    |
| Secchi (m)     |              | —      | —     | —     | —      | 12     |
| Color          |              | —      | —     | —     | —      | —      |
| Sea            |              | —      | 2     | 2     | 3      | 1      |
| Swell          |              | —      | —     | —     | 1      | 1      |
| Air Temp. (°C) |              | 17.2   | 17.0  | 17.4  | 17.8   | 16.8   |
| Baro. (mm)     |              | —      | —     | —     | —      | —      |
| Wind           |              | NE. 4  | NE. 3 | NE. 3 | ENE. 4 | ENE. 4 |
| Cloud          |              | —      | —     | —     | Cu. 10 | Cu. 10 |
| Weather        |              | —      | B     | B     | C      | C      |

| Date           |              | 2 August |        |        |       |        |       |
|----------------|--------------|----------|--------|--------|-------|--------|-------|
| Sta. No.       |              | 01       | 02     | 03     | 04    | 05     | 07    |
| Day            |              | 14       | 14     | 14     | 14    | 14     | 14    |
| Item           | Time<br>Z(m) | 09 35    | 1045   | 1150   | 1250  | 1540   | 1810  |
| T<br>°C        | 0            | 22.37    | 23.42  | 27.00  | 27.37 | 26.92  | 26.66 |
|                | 10           | 19.50    | 16.53  | 20.80  | 26.72 | 26.60  | 25.16 |
|                | 20           | 16.78    | 15.89  | 19.71  | 20.85 | 21.87  | 24.47 |
|                | 30           | 16.82    | 15.12  | 16.75  | 16.97 | 18.42  | 24.65 |
|                | 50           | 14.70    | 14.57  | 14.92  | 15.23 | 13.08  | 19.24 |
|                | 75           | —        | 13.36  | 14.60  | 14.38 | 15.21  | 16.55 |
|                | 100          | —        | —      | 12.25  | 9.92  | 13.89  | —     |
|                | 125          | —        | —      | —      | 6.80  | —      | —     |
|                | 150          | —        | —      | —      | 6.61  | —      | —     |
|                | 200          | —        | —      | —      | —     | —      | —     |
|                | Botm.        | 11.09    | 9.20   | 7.70   | 4.65  | 13.19  | 16.18 |
| S<br>‰         | 0            | 32.37    | 32.41  | 30.87  | 30.78 | 30.89  | 31.12 |
|                | 10           | 31.35    | 33.72  | 32.68  | 30.76 | 30.84  | 31.44 |
|                | 20           | 33.27    | 34.08  | 34.46  | 34.06 | 33.46  | 31.95 |
|                | 30           | 33.41    | 34.29  | 33.82  | 33.67 | 33.24  | 32.38 |
|                | 50           | 33.61    | 34.51  | 34.35  | 34.17 | 34.49  | 33.92 |
|                | 75           | —        | 33.39  | 34.45  | 34.51 | 34.44  | 34.33 |
|                | 100          | —        | —      | 34.36  | 34.35 | 34.42  | —     |
|                | 125          | —        | —      | —      | 34.33 | —      | —     |
|                | 150          | —        | —      | —      | 34.26 | —      | —     |
|                | 200          | —        | —      | —      | —     | —      | —     |
|                | Botm.        | 34.31    | 34.34  | 34.30  | 34.20 | 34.44  | 34.37 |
| Depth (m)      |              | 77       | 105    | 120    | 180   | 140    | 95    |
| Secchi (m)     |              | 8        | 15     | 20     | 15    | 17     | 19    |
| Color          |              | 4        | 3      | 2      | 1     | 2      | 1     |
| Sea            |              | —        | —      | —      | —     | —      | —     |
| Swell          |              | —        | —      | —      | —     | —      | —     |
| Air Temp. (°C) |              | 23.0     | 24.1   | 25.1   | 26.0  | 26.5   | 27.5  |
| Baro. (mm)     |              | 1013     | 1013   | 1013   | 1013  | 1012   | 1012  |
| Wind           |              | SSW. 2   | SSW. 2 | WSW. 2 | W. 2  | WSW. 3 | WS. 2 |
| Cloud          |              | Ci. 4    | Ci. 6  | Ci. 4  | Ci. 7 | Ci. 8  | Ci. 7 |
| Weather        |              | BC       | BC     | BC     | BC    | C      | BC    |





| Date           |              | ⑦ October |       |       |       |       | ⑧ November |       |       |       |       |
|----------------|--------------|-----------|-------|-------|-------|-------|------------|-------|-------|-------|-------|
| Sta. No.       |              | 01        | 02    | 03    | 04    | 05    | 01         | 02    | 03    | 04    | 05    |
| Day            |              | 9         | 9     | 9     | 9     | 7     | 6          | 6     | 6     | 6     | 6     |
| Item           | Time<br>Z(m) | 0835      | 0935  | 1025  | 1135  | 2030  | 1115       | 1210  | 1310  | 1415  | 1510  |
| T<br>C         | 0            | 20.92     | 20.72 | 21.22 | 22.82 | 21.82 | 17.72      | 19.22 | 20.72 | 21.42 | 21.72 |
|                | 10           | 21.27     | 21.12 | 22.73 | 23.24 | 22.31 | 17.84      | 20.69 | 20.64 | 21.50 | 21.72 |
|                | 20           | 20.91     | 21.15 | 23.29 | 23.37 | 22.61 | 14.86      | 20.49 | 20.61 | 21.50 | 21.79 |
|                | 30           | 22.05     | 20.92 | 23.32 | 22.97 | 22.41 | 17.83      | 20.81 | 21.62 | 21.71 | 21.59 |
|                | 50           | 10.97     | 16.18 | 23.40 | 22.71 | 21.84 | 17.97      | 19.97 | 20.21 | 20.98 | 21.47 |
|                | 75           | 9.56      | 13.63 | 15.37 | 17.96 | 17.40 | —          | 16.79 | 15.86 | 16.32 | 18.39 |
|                | 100          | —         | —     | 15.20 | 15.31 | 17.06 | —          | —     | 15.41 | 16.73 | 17.03 |
|                | 125          | —         | —     | —     | 14.20 | 16.17 | —          | —     | —     | 16.49 | 16.84 |
|                | 150          | —         | —     | —     | 4.18  | —     | —          | —     | —     | 9.93  | —     |
|                | 200          | —         | —     | —     | 3.73  | —     | —          | —     | —     | 6.11  | —     |
| Botm.          |              | —         | 8.95  | —     | 3.41  | 14.04 | 14.09      | 14.35 | 11.36 | 7.70  | 11.12 |
| S<br>‰         | 0            | 32.18     | 32.03 | 32.97 | 33.63 | 32.65 | 33.83      | 33.36 | 34.52 | 34.77 | 34.40 |
|                | 10           | 32.18     | 31.98 | 33.27 | 33.67 | 32.83 | 34.43      | 34.59 | 34.66 | 34.56 | 34.39 |
|                | 20           | 32.38     | 31.98 | 33.60 | 33.67 | 33.08 | 33.40      | 33.85 | 33.92 | 34.12 | 34.22 |
|                | 30           | 32.66     | 32.52 | 33.65 | 33.67 | 33.12 | 33.52      | 33.84 | 33.87 | 34.08 | 34.20 |
|                | 50           | 34.25     | 33.68 | 33.72 | 34.65 | 33.28 | 34.44      | 33.80 | 33.88 | 34.11 | 34.20 |
|                | 75           | 34.38     | 34.58 | 34.29 | 33.98 | 33.68 | —          | 33.81 | 33.94 | 34.12 | 34.22 |
|                | 100          | —         | —     | 34.41 | 34.45 | 34.13 | —          | —     | 34.25 | 34.25 | 34.25 |
|                | 125          | —         | —     | —     | 34.55 | 34.59 | —          | —     | —     | 34.75 | 34.71 |
|                | 150          | —         | —     | —     | 34.22 | —     | —          | —     | —     | 34.78 | —     |
|                | 200          | —         | —     | —     | 34.20 | —     | —          | —     | —     | 34.77 | —     |
| Botm.          |              | —         | —     | —     | 34.25 | 34.59 | 33.38      | 33.84 | 34.69 | 34.50 | 34.79 |
| Depth (m)      |              | 80        | 95    | 110   | 220   | 156   | 75         | 100   | 130   | 220   | 160   |
| Secchi (m)     |              | 16        | 20    | 23    | 22    | —     | 9          | 13    | 16    | 17    | 17    |
| Color          |              | 6         | 6     | 6     | 4     | —     | 6          | 4     | 4     | 3     | 3     |
| Sea            |              | 3         | 1     | 1     | 1     | 3     | —          | —     | —     | —     | —     |
| Swell          |              | 1         | 1     | 1     | 1     | 2     | —          | —     | —     | —     | —     |
| Air Temp. (°C) |              | 17.7      | 17.3  | 17.2  | 17.9  | 19.2  | —          | —     | —     | —     | —     |
| Baro. (mm)     |              | —         | —     | —     | —     | —     | —          | —     | —     | —     | —     |
| Wind           |              | NE        | NE    | NE    | NE    | NE    | —          | —     | —     | —     | —     |
| Cloud          |              | Nb. 3     | Nb. 3 | Nb. 3 | Nb. 3 | Nb. 3 | —          | —     | —     | —     | —     |
| Weather        |              | Bc        | Bc    | Bc    | Bc    | Bc    | —          | —     | —     | —     | —     |

| ⑨ December |       |       |       |       |       |       |       |        |
|------------|-------|-------|-------|-------|-------|-------|-------|--------|
| 01         | 02    | 03    | 04    | 05    | 07    | 08    | 10    | 12     |
| 21         | 21    | 21    | 21    | 21    | 21    | 21    | 21    | 20     |
| 1310       | 1200  | 1110  | 0955  | 0845  | 0645  | 0450  | 0145  | 2225   |
| 15.94      | 16.93 | 17.56 | 17.57 | 17.33 | 16.80 | 16.97 | 17.64 | 17.94  |
| 15.97      | 16.81 | 17.64 | 17.58 | 17.36 | 16.82 | 16.97 | 17.64 | 17.95  |
| 15.77      | 16.74 | 17.45 | 17.55 | 16.26 | 16.80 | 16.96 | 17.68 | 17.96  |
| 15.46      | 16.01 | 17.36 | 17.53 | 17.15 | 16.71 | 16.97 | 17.67 | 17.95  |
| 14.24      | 16.41 | 16.85 | 17.46 | 16.06 | 16.81 | 17.00 | 17.67 | 17.96  |
| —          | 15.13 | 16.34 | 17.35 | 17.05 | 16.81 | 16.93 | 17.67 | 17.96  |
| —          | —     | 12.18 | 17.08 | 16.90 | —     | —     | —     | —      |
| —          | —     | —     | 17.60 | 16.55 | —     | —     | —     | —      |
| —          | —     | —     | 11.00 | —     | —     | —     | —     | —      |
| —          | —     | —     | 7.90  | —     | —     | —     | —     | —      |
| 13.97      | 12.45 | —     | 7.80  | 9.70  | 16.81 | 16.89 | 17.67 | 17.96  |
| 34.65      | 34.73 | 34.66 | 34.25 | 34.22 | 34.58 | 34.48 | 34.78 | 34.48  |
| 34.66      | 34.71 | 34.71 | 34.71 | 34.60 | 34.37 | 34.54 | 34.56 | 34.70  |
| 34.68      | 34.68 | 34.73 | 34.62 | 34.62 | 34.48 | 34.61 | 34.32 | 34.69  |
| 34.61      | 34.59 | 34.73 | 34.74 | 34.66 | 34.64 | 34.62 | 34.75 | 34.70  |
| 34.47      | 34.60 | 34.70 | 34.71 | 34.69 | 34.58 | 34.62 | 34.72 | 34.71  |
| —          | 34.56 | 34.63 | 34.73 | 34.70 | 34.58 | 34.63 | 34.69 | 34.71  |
| —          | —     | 34.54 | 34.62 | 34.69 | —     | —     | —     | —      |
| —          | —     | —     | 34.68 | —     | —     | —     | —     | —      |
| —          | —     | —     | 34.54 | —     | —     | —     | —     | —      |
| —          | —     | —     | 34.44 | —     | —     | —     | —     | —      |
| 34.43      | 34.43 | —     | 34.35 | 34.53 | 34.52 | 34.48 | 34.66 | 34.69  |
| 79         | 102   | 110   | 220   | 155   | 88    | 105   | 107   | 92     |
| 18         | 20    | 19    | 22    | 25    | —     | —     | —     | —      |
| 4          | 3     | 3     | 3     | 3     | —     | —     | —     | —      |
| 2          | 2     | 2     | 2     | 2     | 3     | 3     | 4     | 4      |
| 2          | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 3      |
| 11.5       | 9.5   | 9.8   | 9.5   | 9.5   | 9.4   | 10.2  | 10.9  | 11.5   |
| 1023       | 1023  | 1024  | 1024  | 1022  | 1022  | 1021  | 1022  | 1022   |
| NW. 3      | NW. 3 | NW. 3 | W. 3  | W. 3  | NW. 4 | NW. 4 | W. 6  | WNW. 6 |
| Ci. 4      | Ci. 1 | Ci. 1 | Cu. 2 | Cu. 2 | Cu. 1 | Cu. 2 | Cu. 2 | Cu. 3  |
| BC         | B     | B     | B     | B     | B     | B     | B     | BC     |



| ③ June |        |       | ④ August |       |       |       |       |
|--------|--------|-------|----------|-------|-------|-------|-------|
| 01     | 02     | 03    | 01       | 02    | 03    | 04    | 05    |
| 12     | 12     | 12    | 14       | 14    | 14    | 14    | 14    |
| 0716   | 0555   | 0409  | —        | —     | —     | —     | —     |
| 18.3   | 17.9   | 18.5  | 23.80    | 24.43 | 26.70 | 25.14 | 26.20 |
| 17.42  | 17.23  | 17.96 | 21.96    | 24.84 | 26.53 | 24.74 | 26.09 |
| 17.10  | 16.40  | 17.80 | 16.33    | 19.07 | 18.52 | 23.44 | 22.71 |
| 16.38  | 16.07  | 17.21 | 16.29    | 16.44 | 17.96 | 20.00 | 20.89 |
| 15.74  | 15.05  | 15.85 | 15.21    | 14.23 | 17.65 | 19.37 | 19.53 |
| —      | —      | 14.41 | —        | 13.54 | 14.20 | 18.38 | 17.38 |
| —      | —      | —     | —        | —     | 14.16 | 15.86 | 16.57 |
| —      | —      | —     | —        | —     | —     | 15.38 | —     |
| 15.67  | 14.41  | 14.52 | —        | —     | —     | —     | —     |
| 34.22  | 34.25  | 34.62 | 32.76    | 31.76 | 30.97 | 30.51 | 30.24 |
| 34.24  | 34.24  | 34.28 | 32.81    | 32.43 | 30.88 | 30.71 | 30.60 |
| 34.25  | 34.21  | 34.28 | 33.79    | 33.31 | 32.49 | 32.35 | 31.69 |
| 34.24  | 34.24  | 34.28 | 33.94    | 33.89 | 33.73 | 34.08 | 32.33 |
| 34.28  | 34.39  | 34.30 | 34.04    | 34.22 | 34.33 | 34.43 | 34.24 |
| —      | —      | 34.64 | —        | 34.27 | 34.31 | 34.50 | 34.44 |
| —      | —      | —     | —        | —     | 34.31 | 34.46 | 34.35 |
| —      | —      | —     | —        | —     | —     | 34.41 | —     |
| 34.22  | 34.48  | 34.55 | —        | —     | —     | —     | —     |
| 60     | 72     | 88    | —        | —     | —     | —     | —     |
| 19     | —      | —     | —        | —     | —     | —     | —     |
| —      | —      | —     | —        | —     | —     | —     | —     |
| 1      | 1      | 1     | —        | —     | —     | —     | —     |
| 1      | 1      | 0     | —        | —     | —     | —     | —     |
| 18.9   | 18.9   | 19.4  | —        | —     | —     | —     | —     |
| —      | —      | —     | —        | —     | —     | —     | —     |
| NE. 2  | NE. 4  | NE. 3 | —        | —     | —     | —     | —     |
| Cb. 10 | Cb. 10 | —     | —        | —     | —     | —     | —     |
| R      | R      | —     | —        | —     | —     | —     | —     |

## 205선 해양관측성적

Oceanographic Data, Line 205

| Date           |              | March |       |       |       |       |        |       |
|----------------|--------------|-------|-------|-------|-------|-------|--------|-------|
| Orig. No.      |              | 01    | 02    | 03    | 04    | 05    | 01     | 02    |
| Day            |              | 15    | 15    | 15    | 15    | 14    | 4      | 4     |
| Item           | Time<br>Z(m) | 0520  | 0410  | 0235  | 0035  | 1830  | 1140   | 1250  |
| T<br>℃         | 0            | 10.73 | 11.95 | 14.28 | 14.49 | 14.78 | 14.2   | 14.6  |
|                | 10           | 10.50 | 11.85 | 14.15 | 14.34 | 14.61 | 13.80  | 14.00 |
|                | 20           | —     | —     | —     | —     | —     | —      | —     |
|                | 25           | 10.42 | 11.72 | 14.11 | 13.57 | 14.30 | 13.60  | 13.39 |
|                | 30           | —     | —     | —     | —     | —     | —      | —     |
|                | 50           | 9.99  | 10.90 | 13.49 | 12.55 | 13.77 | 12.47  | 12.89 |
|                | 75           | —     | —     | —     | —     | —     | —      | —     |
|                | 100          | —     | —     | —     | —     | 13.33 | —      | —     |
|                | Botm.        | 9.77  | 10.87 | 10.98 | 12.49 | 12.92 | 12.45  | 12.58 |
| S<br>‰         | 0            | 34.47 | 34.74 | 34.74 | 34.74 | 34.74 | 34.42  | 34.63 |
|                | 10           | 34.33 | 34.72 | 34.72 | 34.81 | 34.74 | 34.51  | 34.43 |
|                | 20           | —     | —     | —     | —     | —     | —      | —     |
|                | 25           | 34.24 | 34.56 | 34.72 | 34.78 | 34.74 | 34.51  | 34.43 |
|                | 30           | —     | —     | —     | —     | —     | —      | —     |
|                | 50           | 34.22 | 34.47 | 34.67 | 34.65 | 34.74 | 34.43  | 34.60 |
|                | 75           | —     | —     | —     | —     | —     | —      | —     |
|                | 100          | —     | —     | —     | —     | 34.72 | —      | —     |
|                | Botm.        | 34.22 | 34.45 | 34.45 | 34.65 | 34.72 | 34.42  | 34.60 |
| Depth (m)      |              | 60    | 60    | 82    | 100   | 120   | 55     | 60    |
| Secchi (m)     |              | —     | —     | —     | —     | 16    | 10     | 11    |
| Color          |              | —     | —     | —     | —     | —     | —      | —     |
| Sea            |              | 4     | 5     | 6     | 5     | 4     | 1      | 1     |
| Swell          |              | 2     | 2     | 3     | 3     | 2     | 1      | 1     |
| Air Temp. (°C) |              | 12.3  | 12.9  | 13.9  | 12.3  | 11.5  | 15     | 15.7  |
| Baro. (mm)     |              | —     | —     | —     | —     | —     | —      | —     |
| Wind           |              | SW. 3 | S. 3  | S. 4  | S. 4  | S. 3  | E. 2   | E. 5  |
| Wind           |              | As. 9 | As. 9 | Ac. 9 | As. 9 | As. 4 | Sc. 10 | As. 1 |
|                |              | C     | C     | C     | C     | BC    | C      | B     |



| (2) May |       |       |       | (3) June |        |        |        |        |
|---------|-------|-------|-------|----------|--------|--------|--------|--------|
| 03      | 04    | 05    | 06    | 01       | 02     | 03     | 04     | 05     |
| 4       | 4     | 4     | 4     | 13       | 12     | 12     | 12     | 12     |
| 1415    | 1620  | 1815  | 2015  | 0035     | 2340   | 2149   | 1930   | 1725   |
| 15.2    | 17.0  | 18.2  | 16.6  | 17.5     | 18.0   | 18.1   | 19.5   | 19.6   |
| 14.98   | 16.99 | 18.02 | 16.60 | 16.43    | 18.11  | 17.83  | 19.45  | 19.72  |
| —       | —     | —     | —     | 15.74    | 17.05  | 15.61  | 18.70  | 19.55  |
| 13.62   | 16.65 | 17.61 | 16.40 | 15.52    | 16.06  | 14.92  | 18.26  | 17.90  |
| —       | —     | —     | —     | —        | —      | —      | —      | —      |
| 12.72   | 15.57 | 16.25 | 16.11 | 14.76    | —      | 14.44  | 16.45  | 14.51  |
| —       | —     | —     | 14.86 | —        | —      | —      | 16.09  | 14.86  |
| —       | —     | —     | —     | —        | —      | —      | —      | 14.12  |
| 12.77   | 14.68 | 14.67 | 14.79 | 14.59    | 15.05  | 14.11  | 14.32  | 14.11  |
| 34.51   | 34.51 | 34.51 | 34.60 | 34.18    | 34.28  | 33.90  | 34.04  | 34.06  |
| 34.51   | 34.51 | 34.51 | 34.60 | 34.24    | 34.31  | 34.03  | 34.01  | 34.05  |
| —       | —     | —     | —     | 34.34    | 34.31  | 34.30  | 34.02  | 34.05  |
| 34.51   | 34.51 | 34.51 | 34.60 | —        | —      | —      | —      | —      |
| —       | —     | —     | —     | 34.33    | 34.36  | 34.47  | 34.24  | 34.08  |
| 34.49   | 34.49 | 34.61 | 34.63 | 34.47    | —      | 34.49  | 34.37  | 34.13  |
| —       | —     | —     | —     | —        | —      | —      | 34.34  | 34.53  |
| —       | —     | 34.63 | 34.63 | —        | —      | —      | —      | 34.48  |
| 34.49   | 34.49 | 34.63 | 34.63 | 34.56    | 34.35  | 34.54  | 34.51  | 34.48  |
| 78      | 100   | 145   | 132   | 60       | 51     | 80     | 100    | 122    |
| 14      | 13    | 12    | —     | —        | —      | —      | 18     | 23     |
| —       | —     | —     | —     | —        | —      | —      | —      | —      |
| 1       | 1     | 1     | 1     | 1        | 1      | 2      | 2      | 2      |
| 1       | 1     | 1     | 1     | 1        | 0      | 1      | 1      | 1      |
| 16.1    | 16.6  | 15.2  | 16.7  | 18.5     | 19.4   | 19.7   | 19.4   | 20.4   |
| —       | —     | —     | —     | —        | —      | —      | —      | —      |
| E. 5    | E. 5  | E. 1  | E. 1  | NE. 1    | NE. 3  | NE. 2  | NE. 3  | NE. 2  |
| As. 10  | As. 8 | Cs. 2 | 0     | —        | Ac. 10 | Ac. 10 | Ac. 10 | Ac. 10 |
| C       | C     | B     | B     | B        | C      | C      | C      | C      |

| Date           |       | ④ August |       |       |       |       |       |       |       |
|----------------|-------|----------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 01       | 02    | 03    | 04    | 05    | 06    | 07    | 08    |
| Day            |       | 15       | 15    | 15    | 15    | 15    | 15    | 15    | 15    |
| Item           | Time  | —        | —     | —     | —     | —     | —     | —     | —     |
|                | Z(m)  |          |       |       |       |       |       |       |       |
| T<br>℃         | 0     | 23.00    | 25.20 | 25.60 | 27.80 | 30.15 | 28.80 | 28.10 | 28.20 |
|                | 10    | 22.53    | 21.38 | 22.05 | 24.19 | 28.14 | 28.03 | 28.03 | 28.24 |
|                | 20    | 18.72    | 16.60 | 19.30 | 19.37 | 27.45 | 27.97 | 28.76 | 27.92 |
|                | 30    | 15.38    | 14.68 | 14.69 | 17.46 | 23.77 | 26.49 | 25.73 | 26.70 |
|                | 50    | 14.16    | 13.94 | 13.84 | 14.50 | 20.95 | 22.95 | 22.26 | 23.97 |
|                | 75    | —        | —     | 13.73 | 13.73 | 17.87 | 21.61 | 20.12 | 20.86 |
|                | 100   | —        | —     | —     | 13.71 | 13.91 | 18.21 | 19.40 | 19.01 |
|                | 125   | —        | —     | —     | —     | —     | 15.22 | 16.19 | 17.32 |
|                | 150   | —        | —     | —     | —     | —     | —     | —     | 16.95 |
|                | Botm. | —        | —     | —     | —     | —     | —     | —     | —     |
| S<br>‰         | 0     | 32.53    | 32.20 | 32.25 | 30.60 | 30.20 | 30.56 | 29.79 | 29.83 |
|                | 10    | 32.56    | 32.58 | 32.54 | 30.00 | 30.69 | 30.42 | 29.63 | 29.72 |
|                | 20    | 33.55    | .45   | 34.22 | 32.52 | 31.66 | 30.56 | 30.31 | 29.96 |
|                | 30    | 34.51    | 34.15 | 33.13 | 33.57 | 33.77 | 32.23 | 33.41 | 32.24 |
|                | 50    | 34.28    | 33.89 | 33.98 | 33.88 | 34.11 | 33.43 | 34.20 | 33.99 |
|                | 75    | —        | —     | 34.25 | 34.22 | 34.21 | 34.30 | 34.18 | 34.37 |
|                | 100   | —        | —     | —     | 34.27 | 33.87 | 34.16 | 34.62 | 34.55 |
|                | 125   | —        | —     | —     | —     | —     | 34.58 | 34.56 | 34.57 |
|                | 150   | —        | —     | —     | —     | —     | —     | —     | 34.58 |
|                | Botm. | —        | —     | —     | —     | —     | —     | —     | —     |
| Depth (m)      |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Secchi (m)     |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Color          |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Sea            |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Swell          |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Air Temp. (°C) |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Baro. (mm)     |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Wind           |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Cloud          |       | —        | —     | —     | —     | —     | —     | —     | —     |
| Weather        |       | —        | —     | —     | —     | —     | —     | —     | —     |

## ⑤ October

| 01    | 02    | 03    | 04    | 05    | 06    | 27°50'00"<br>33°11'30" |
|-------|-------|-------|-------|-------|-------|------------------------|
| 9     | 9     | 10    | 10    | 10    | 10    | 10                     |
| 2040  | 2150  | 0130  | 0330  | 0610  | 0815  | 1130                   |
| 20.32 | 20.90 | 21.80 | 21.50 | 22.50 | 22.40 | 23.39                  |
| 21.87 | 21.42 | 21.83 | 21.39 | 22.90 | 23.21 | 23.71                  |
| 20.96 | 22.51 | 21.91 | 21.96 | 22.93 | 23.18 | 23.69                  |
| 19.45 | 17.94 | 21.19 | 22.93 | 22.89 | 23.38 | 23.73                  |
| 15.72 | 15.54 | 18.83 | 17.87 | 22.79 | 33.14 | 23.28                  |
| —     | —     | —     | 16.38 | 19.22 | 19.55 | 19.75                  |
| —     | —     | —     | —     | 16.58 | 17.64 | 17.47                  |
| —     | —     | —     | —     | —     | —     | —                      |
| —     | —     | —     | —     | —     | —     | —                      |
| 15.70 | 15.53 | 15.95 | 14.64 | 14.48 | 14.43 | 15.62                  |
| 32.53 | 32.62 | 33.27 | 32.63 | 33.64 | 33.77 | 34.06                  |
| 32.54 | 33.06 | 33.18 | 32.57 | 33.66 | 33.81 | 33.97                  |
| 32.93 | 32.56 | 33.20 | 33.11 | 33.66 | 33.82 | 33.93                  |
| 32.61 | 32.96 | 33.53 | 33.74 | 33.66 | 33.92 | 33.95                  |
| 34.25 | 34.32 | 33.61 | 33.51 | 33.70 | 34.09 | 33.91                  |
| —     | —     | —     | 34.67 | 34.51 | 34.49 | 34.59                  |
| —     | —     | —     | —     | 34.73 | 34.74 | 34.71                  |
| —     | —     | —     | —     | —     | —     | —                      |
| —     | —     | —     | —     | —     | —     | —                      |
| 34.35 | 34.39 | 34.61 | 34.71 | 34.72 | 34.72 | 34.76                  |
| 60    | 60    | 82    | 100   | 120   | 120   | 125                    |
| —     | —     | —     | —     | —     | 19    | 20                     |
| —     | —     | —     | —     | —     | —     | —                      |
| 0     | 0     | 0     | 0     | 0     | 0     | —                      |
| 1     | 0     | 0     | 0     | 0     | 0     | —                      |
| 18.2  | 18.3  | 18.5  | 18.2  | 18.3  | 19.4  | 21.2                   |
| —     | —     | —     | —     | —     | —     | —                      |
| W. 1  | SW. 2 | SW. 2 | SW. 2 | E. 1  | SE. 2 | SE. 2                  |
| —     | Cb. 2 | Cb. 2 | Cb. 2 | Cb. 5 | Cb. 5 | St. 6                  |
| B     | B     | B     | B     | BC    | BC    | BC                     |

| Date           |              | (6) December |       |       |       |        |        |        |       |       |
|----------------|--------------|--------------|-------|-------|-------|--------|--------|--------|-------|-------|
| Sta. No.       |              | 01           | 02    | 03    | 04    | 06     | 08     | E6     | E5    | E4    |
| Day            |              | 19           | 19    | 19    | 19    | 20     | 20     | 20     | 20    | 20    |
| Item           | Time<br>Z(m) | 1530         | 1640  | 1810  | 2040  | 0050   | 0505   | 1155   | 1510  | 1815  |
| T<br>°C        | 0            | 12.96        | 12.79 | 14.73 | 17.87 | 18.46  | 18.20  | 18.07  | 18.07 | 17.90 |
|                | 10           | 12.94        | 12.70 | 14.72 | 17.89 | 18.50  | 18.24  | 18.10  | 18.10 | 17.94 |
|                | 20           | 12.89        | 12.73 | 14.71 | 17.72 | 18.50  | 18.18  | 18.15  | 18.15 | 17.93 |
|                | 30           | 12.94        | 12.83 | 14.63 | 17.60 | 18.50  | 18.03  | 17.51  | 18.15 | 17.89 |
|                | 50           | —            | —     | 13.89 | 16.95 | 18.45  | 17.94  | 17.49  | 18.16 | 17.91 |
|                | 75           | —            | —     | —     | 16.28 | 18.50  | 17.83  | 17.57  | 18.14 | 17.90 |
|                | 100          | —            | —     | —     | —     | 18.48  | 17.86  | 17.52  | —     | —     |
|                | 125          | —            | —     | —     | —     | —      | 17.30  | —      | —     | —     |
|                | 150          | —            | —     | —     | —     | —      | 16.28  | —      | —     | —     |
| Botm.          |              | 12.99        | 13.28 | 13.51 | 15.48 | 18.49  | 15.43  | 17.38  | 18.13 | 17.71 |
| S<br>‰         | 0            | 34.16        | 33.68 | 34.54 | 34.72 | 34.50  | 34.76  | 34.44  | 34.49 | 34.76 |
|                | 10           | 34.16        | 33.99 | 34.53 | 34.66 | 34.81  | 34.80  | 34.64  | 34.66 | 34.74 |
|                | 20           | 34.12        | 33.99 | 34.50 | 34.64 | 34.79  | 34.76  | 34.67  | 34.70 | 34.72 |
|                | 30           | 34.17        | 34.02 | 34.48 | 34.80 | 34.81  | 34.74  | 34.64  | 34.69 | 34.72 |
|                | 50           | —            | —     | 34.35 | 34.82 | 34.81  | 34.72  | 34.63  | 34.67 | 34.75 |
|                | 75           | —            | —     | —     | 34.84 | 34.83  | 34.66  | 34.68  | 34.63 | 34.71 |
|                | 100          | —            | —     | —     | —     | 34.84  | 34.70  | 34.66  | —     | —     |
|                | 125          | —            | —     | —     | —     | —      | 34.78  | —      | —     | —     |
|                | 150          | —            | —     | —     | —     | —      | 34.81  | —      | —     | —     |
| Botm.          |              | 34.21        | 34.20 | 34.18 | 34.68 | 34.82  | 34.74  | 34.74  | 34.72 | 34.70 |
| Depth (m)      |              | 58           | 60    | 80    | 96    | 125    | 180    | 138    | 90    | 95    |
| Secchi (m)     |              | 5            | 3     | —     | —     | —      | —      | 8      | 8     | —     |
| Color          |              | 6            | 5     | 5     | 4     | 3      | 3      | 2      | 4     | —     |
| Sea            |              | 2            | 2     | 2     | 1     | 3      | 3      | 4      | 4     | 4     |
| Swell          |              | 2            | 1     | 1     | 1     | 2      | 3      | 3      | 3     | 3     |
| Air Temp. (°C) |              | 8.3          | 8.3   | 9.0   | 10.2  | 10.8   | 13.5   | 9.9    | 10.8  | 11.5  |
| Baro. (mm)     |              | 1024         | 1024  | 1024  | 1024  | 1022   | 1021   | 1021   | 1021  | 1021  |
| Wind           |              | NW. 3        | NW. 2 | NW. 2 | NW. 2 | NW. 4  | W. 4   | NNW. 5 | NW. 6 | W. 6  |
| Cloud          |              | As. 9        | Ac. 9 | Ac. 9 | As. 8 | St. 10 | St. 10 | Sc. 10 | Cu. 4 | Cu. 3 |
| Weather        |              | C            | C     | C     | C     | R      | C      | C      | BC    | BC    |

# 204선 해양관측성적

Oceanographic Data, Line 204

| Date           |              | ① March |        |        |       |       |       | ② May  |       |       |
|----------------|--------------|---------|--------|--------|-------|-------|-------|--------|-------|-------|
| Sta. No.       |              | 01      | 02     | 03     | 04    | 05    | 06    | 01     | 02    | 03    |
| Day            |              | 15      | 15     | 15     | 21    | 21    | 21    | 4      | 4     | 4     |
| Item           | Time<br>Z(m) | 0555    | 0725   | 0905   | 0905  | 1140  | 1215  | 0110   | 0945  | 0830  |
| T<br>C         | 0            | 10.44   | 8.82   | 11.41  | 12.98 | 14.70 | 14.82 | 12.8   | 12.7  | 13.0  |
|                | 10           | 9.90    | 9.07   | 9.39   | 13.02 | 14.61 | 14.61 | 12.60  | 12.67 | 12.67 |
|                | 25           | 9.89    | —      | 9.01   | 13.02 | 14.62 | 14.82 | 12.17  | 12.42 | 12.09 |
|                | 50           | —       | —      | —      | 13.08 | 14.30 | 14.80 | —      | —     | —     |
|                | 100          | —       | —      | —      | —     | —     | 14.54 | —      | —     | —     |
|                | Botm.        | 9.39    | 8.99   | 8.35   | 13.04 | 14.16 | 14.21 | 11.99  | 12.39 | 12.08 |
| S<br>‰         | 0            | 34.40   | 34.05  | 34.24  | 34.74 | 34.72 | 34.74 | 33.96  | 33.98 | 34.07 |
|                | 10           | 34.36   | 34.22  | 34.05  | 34.73 | 34.76 | 34.72 | 33.98  | 33.96 | 34.05 |
|                | 25           | 34.36   | —      | 34.07  | 34.72 | 34.74 | 34.67 | 34.18  | 33.93 | 34.20 |
|                | 50           | —       | —      | —      | 34.72 | 34.74 | 34.67 | —      | —     | —     |
|                | 100          | —       | —      | —      | —     | —     | 34.67 | —      | —     | —     |
|                | Botm.        | 34.24   | 34.50  | 34.09  | 34.72 | 34.72 | 34.63 | 34.18  | 33.89 | 34.24 |
| Depth (m)      |              | 55      | 28     | 40     | 80    | 95    | 125   | 47     | 30    | 41    |
| Secchi (m)     |              | —       | —      | —      | 8     | 12    | 11    | 10     | 1.5   | 8     |
| Color          |              | —       | —      | —      | —     | —     | —     | —      | —     | —     |
| Sea            |              | 4       | 4      | 4      | 4     | 4     | 4     | 1      | 1     | 1     |
| Swell          |              | 2       | 3      | 3      | 2     | 2     | 2     | 1      | 1     | 1     |
| Air Temp. (°C) |              | 11.3    | 10.4   | 12.3   | 6.9   | 7.5   | 8.9   | 14.8   | 14.8  | 14.5  |
| Baro. (mm)     |              | —       | —      | —      | —     | —     | —     | —      | —     | —     |
| Wind           |              | SW. 3   | SW. 3  | SW. 4  | NW. 3 | NW. 3 | NW. 3 | E. 1   | E. 1  | NE. 1 |
| Cloud          |              | As. 10  | As. 10 | As. 10 | 0     | 0     | 0     | Sc. 10 | As. 8 | Cs. 6 |
| Weather        |              | C       | C      | C      | B     | B     | B     | C      | C     | B     |

| Date           |              | ③ June |       |       |       |       |       |       |        |       |
|----------------|--------------|--------|-------|-------|-------|-------|-------|-------|--------|-------|
| Sta. No.       |              | 04     | 05    | 06    | 01    | 02    | 03    | 04    | 05     | 06    |
| Day            |              | 1      | 1     | 1     | 13    | 13    | 13    | 14    | 14     | 14    |
| Item           | Time<br>Z(m) | 1920   | 1805  | 1640  | 0135  | 0245  | 0415  | 1225  | 1340   | 1525  |
| T<br>℃         | 0            | 16.5   | 17.2  | 16.2  | 17.9  | 18.2  | 17.5  | 19.3  | 20.11  | 20.4  |
|                | 10           | 14.43  | 16.40 | 15.79 | 17.48 | 18.79 | 17.23 | 19.13 | 19.22  | 19.72 |
|                | 20           | 14.39  | 15.65 | 14.48 | 16.66 | 16.71 | 16.49 | 18.71 | 18.80  | 19.92 |
|                | 25           | —      | —     | —     | —     | —     | —     | —     | —      | —     |
|                | 30           | —      | —     | —     | 15.45 | —     | 14.86 | 16.16 | 16.78  | 17.50 |
|                | 50           | 13.77  | 14.38 | 14.29 | —     | —     | —     | 14.87 | 15.82  | 17.70 |
|                | 75           | —      | —     | —     | —     | —     | —     | —     | 13.82  | 15.46 |
|                | 100          | —      | —     | 13.70 | —     | —     | —     | —     | —      | —     |
|                | Botm.        | 13.70  | 14.18 | 13.70 | 15.39 | 16.59 | 14.59 | 14.88 | 13.76  | 14.85 |
| S<br>‰         | 0            | 34.52  | 34.52 | —     | 34.32 | 34.25 | 34.21 | 34.14 | 34.06  | 34.02 |
|                | 10           | 34.60  | 34.49 | —     | 34.33 | 34.18 | 34.23 | 34.12 | 34.07  | 34.02 |
|                | 20           | —      | —     | —     | 34.26 | 34.13 | 34.26 | 34.25 | 34.28  | 34.19 |
|                | 25           | 34.61  | 34.51 | —     | —     | —     | —     | —     | —      | —     |
|                | 30           | —      | —     | —     | 34.32 | —     | 34.36 | 34.31 | 34.27  | 34.25 |
|                | 50           | 34.67  | 34.60 | —     | —     | —     | —     | 34.48 | 34.48  | 34.34 |
|                | 75           | —      | —     | —     | —     | —     | —     | —     | 34.51  | 34.50 |
|                | 100          | —      | —     | —     | —     | —     | —     | —     | —      | —     |
|                | Botm.        | 34.60  | 34.60 | —     | 34.31 | 34.18 | 34.38 | 34.52 | 34.07  | 34.54 |
| Depth (m)      |              | 74     | 94    | 115   | 40    | 36    | 48    | 80    | 92     | 106   |
| Secchi (m)     |              | 10.5   | 9     | 7     | —     | —     | —     | 2     | 21     | 22    |
| Color          |              | —      | —     | —     | —     | —     | —     | —     | —      | —     |
| Sea            |              | 0      | 0     | 1     | 0     | 0     | 0     | 2     | 1      | 1     |
| Swell          |              | 0      | 1     | 1     | 0     | 0     | 0     | 2     | 1      | 1     |
| Air Temp. (°C) |              | 14.7   | 16.1  | 15.6  | 18.5  | 18.6  | 18.5  | 19.9  | 20.2   | 21.1  |
| Baro. (mm)     |              | —      | —     | —     | —     | —     | —     | —     | —      | —     |
| Wind           |              | 0      | 0     | ENE   | 0     | S. 1  | S. 1  | E. 3  | ESE. 2 | E. 1  |
| Cloud          |              | A. 5   | Cs. 8 | Cs. 8 | Ci. 6 | Ci. 5 | —     | 0     | 0      | Cu. 1 |
| Weather        |              | BC     | C     | BC    | BC    | BC    | BC    | B     | B      | B     |



④ August

| 01    | 02     | 03     | 04    | 05     | 06    |
|-------|--------|--------|-------|--------|-------|
| 10    | 10     | 10     | 13    | 13     | 13    |
| 0735  | 0935   | 1110   | 0811  | 1017   | 1215  |
| 24.30 | 22.55  | 23.45  | 26.10 | 26.50  | 26.80 |
| 22.29 | 21.90  | 20.48  | 25.75 | 25.42  | 25.57 |
| 17.01 | 19.19  | 16.64  | 18.52 | 20.56  | 21.21 |
| —     | —      | —      | —     | —      | —     |
| 16.91 | —      | 15.05  | 16.07 | 17.12  | 19.72 |
| —     | —      | —      | 13.67 | 15.58  | 15.94 |
| —     | —      | —      | —     | 14.28  | 14.76 |
| —     | —      | —      | —     | —      | 13.64 |
| 15.11 | 15.10  | 14.60  | 13.70 | 14.34  | 13.75 |
| 32.48 | 32.79  | 32.42  | 30.33 | 32.40  | 30.48 |
| 33.03 | 33.92  | 32.94  | 30.57 | 30.68  | 30.59 |
| 33.88 | 33.45  | 33.68  | 32.77 | 32.58  | 32.26 |
| —     | —      | —      | —     | —      | —     |
| 34.01 | —      | 34.00  | 33.30 | 33.58  | 32.55 |
| —     | —      | —      | 33.83 | 34.00  | 33.13 |
| —     | —      | —      | —     | 34.25  | 33.96 |
| —     | —      | —      | —     | —      | 34.20 |
| 34.20 | 34.09  | 34.20  | 34.23 | 34.34  | 34.28 |
| 40    | 30     | 40     | 80    | 96     | 127   |
| 15    | 17     | 12     | 17    | 18     | 16    |
| 4     | 4      | 3      | 3     | 3      | 3     |
| 2     | 3      | —      | 1.5   | 1.5    | 1     |
| —     | —      | —      | —     | —      | —     |
| 25.0  | 24.8   | 25.3   | 22.6  | 22.9   | 23.9  |
| 1007  | 1006   | 1004   | 1015  | 1015   | 1016  |
| SW. 3 | SSE. 0 | SSE. 2 | E. 3  | E. 3   | E. 4  |
| As. 6 | Sc. 10 | Ns. 10 | Sc. 9 | Sc. 10 | Sc. 8 |
| C     | C      | R      | C     | C      | C     |

## 203선 해양관측성적

Oceanographic Data, Line 203

| Date           |              | ① March |       |       | ② April |       |       |
|----------------|--------------|---------|-------|-------|---------|-------|-------|
| Sta. No.       |              | 01      | 02    | 03    | 01      | 02    | 03    |
| Day            |              | 25      | 25    | 22    | 30      | 30    | 30    |
| Item           | Time<br>Z(m) | 1225    | 1055  | 1715  | 1050    | 1215  | 1420  |
| T<br>°C        | 0            | 13.17   | 13.59 | 13.90 | 13.2    | 14.8  | 15.1  |
|                | 10           | 13.13   | 13.55 | 13.72 | 13.0    | 14.43 | 15.45 |
|                | 20           | —       | —     | —     | —       | —     | —     |
|                | 25           | 13.22   | 13.61 | 13.69 | 13.69   | 14.30 | 15.41 |
|                | 30           | —       | —     | —     | —       | —     | —     |
|                | 50           | 12.92   | 13.61 | 13.70 | 12.10   | 13.80 | 15.37 |
|                | 75           | —       | —     | —     | —       | —     | —     |
|                | 100          | —       | —     | —     | —       | 13.10 | —     |
|                | Botm.        | 12.80   | 13.39 | 13.69 | 12.05   | 13.10 | 14.91 |
| S<br>‰         | 0            | 34.76   | 34.74 | 34.69 | 34.43   | 34.65 | 34.67 |
|                | 10           | 34.69   | 34.74 | 34.67 | 34.43   | 34.63 | 34.65 |
|                | 20           | —       | —     | —     | —       | —     | —     |
|                | 25           | 34.67   | 34.72 | 34.69 | 34.16   | 34.61 | 34.65 |
|                | 30           | —       | —     | —     | —       | —     | —     |
|                | 50           | 34.67   | 34.74 | 34.67 | 34.42   | 34.61 | 34.65 |
|                | 75           | —       | —     | —     | —       | —     | —     |
|                | 100          | —       | —     | —     | —       | 34.61 | —     |
|                | Botm.        | 34.67   | 34.69 | 34.67 | 34.42   | 34.61 | 34.65 |
| Depth (m)      |              | 85      | 105   | 98    | 64      | 120   | 88    |
| Secchi (m)     |              | 6       | 7     | 6     | 11      | 9     | —     |
| Color          |              | —       | —     | —     | —       | —     | —     |
| Sea            |              | 4       | 4     | 2     | 1       | 1     | 1     |
| Swell          |              | 2       | 2     | 1     | 2       | 2     | 2     |
| Air Temp. (°C) |              | 8.7     | 8.5   | 10.5  | 13.7    | 12.8  | 12.8  |
| Baro. (mm)     |              | —       | —     | —     | —       | —     | —     |
| Wind           |              | N. 3    | NW. 3 | N. 2  | SE. 1   | NW. 1 | NW. 1 |
| Cloud          |              | Cc. 2   | Ac. 4 | Cs. 6 | Cc. 10  | Cc. 6 | Ac. 6 |
| Weather        |              | B       | BC    | BC    | C       | BC    | BC    |

| ③ June |        |       | ④ August |       |        |
|--------|--------|-------|----------|-------|--------|
| 01     | 02     | 03    | 01       | 02    | 03     |
| 16     | 16     | 16    | 13       | 13    | 13     |
| 1650   | 1440   | 1225  | 1715     | 1850  | 2110   |
| 17.1   | 18.9   | 19.7  | 21.60    | 26.76 | 26.04  |
| 17.42  | 17.32  | 19.49 | 19.40    | 23.12 | 20.52  |
| 15.66  | 16.22  | 18.72 | 17.94    | 17.00 | 16.07  |
| —      | —      | —     | —        | —     | —      |
| 15.58  | 15.39  | 17.94 | 16.07    | 14.68 | 14.47  |
| 15.18  | 15.05  | 14.93 | —        | 13.41 | 13.28  |
| —      | —      | 13.93 | —        | 13.32 | 13.12  |
| —      | —      | —     | —        | —     | 13.20  |
| 14.88  | 14.36  | 13.92 | 13.86    | 13.41 | 13.16  |
| 33.96  | 34.05  | 34.06 | 37.43    | 30.64 | 30.60  |
| 33.96  | 33.99  | 34.10 | 32.57    | 30.94 | 32.08  |
| 34.05  | 34.06  | 34.22 | 33.00    | 32.60 | 32.76  |
| —      | —      | —     | —        | —     | —      |
| 34.07  | 34.07  | 34.14 | 33.55    | 33.40 | 33.32  |
| 34.12  | 34.51  | 34.52 | —        | 34.03 | 33.62  |
| —      | —      | 34.53 | —        | 34.28 | 34.14  |
| —      | —      | —     | —        | —     | 34.24  |
| 34.21  | 34.62  | 34.52 | 34.16    | 34.28 | 34.25  |
| 60     | 88     | 104   | 52       | 85    | 128    |
| 13     | 12     | 19    | 10       | 13    | —      |
| —      | —      | —     | 3        | 3     | —      |
| 0      | 0      | 2     | 1        | 1.5   | 2      |
| 1      | 1      | 1     | —        | —     | —      |
| 20.1   | 21.6   | 21.3  | 23.2     | 27.5  | 26.5   |
| —      | —      | —     | 1012     | 1013  | 1013   |
| SE. 2  | NE. 1  | NE. 1 | E. 1     | SW. 1 | WSW. 2 |
| Ns. 9  | Ns. 10 | As. 5 | Sc. 9    | Sc. 7 | Sc. 3  |
| C      | C      | BC    | C        | BC    | BC     |



서 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS  
WESTERN WATERS

1 9 6 5





# 316선 해양관측성적

## Oceanographic Data, Line 316

| Date           |              | ① January |        |       |        |        |       |       |
|----------------|--------------|-----------|--------|-------|--------|--------|-------|-------|
| Sta. No.       |              | 08        | 10     | 12    | 14     | 16     | 18    | 20    |
| Day            |              | 3         | 3      | 3     | 3      | 3      | 3     | 3     |
| Item           | Time<br>Z(m) | 2115      | 1745   | 1420  | 1100   | 0740   | 0416  | 0105  |
| T<br><br>°C    | 0            | 18.40     | 18.60  | 18.60 | 18.50  | 18.00  | 17.00 | 15.30 |
|                | 10           | 16.03     | 18.52  | 18.44 | 18.41  | 17.73  | 16.94 | 15.32 |
|                | 20           | 18.62     | 18.67  | 18.61 | 18.55  | 17.79  | 16.97 | 15.42 |
|                | 30           | 18.75     | 18.72  | 18.65 | 18.56  | 17.78  | 17.00 | 15.46 |
|                | 50           | 18.69     | 18.65  | 18.60 | 18.56  | 17.76  | 16.99 | —     |
|                | 75           | 18.65     | 18.60  | 18.55 | 18.54  | 17.80  | —     | —     |
|                | 100          | —         | 18.70  | 18.65 | —      | —      | —     | —     |
|                | Botm.        | 18.72     | 17.07  | 16.12 | 17.35  | 17.85  | 16.98 | 15.50 |
| S<br><br>‰     | 0            | 34.90     | 34.90  | 34.92 | 34.93  | 34.81  | 34.59 | 34.41 |
|                | 10           | 34.91     | 34.90  | 34.90 | 34.91  | 34.81  | 34.58 | 34.41 |
|                | 20           | 34.91     | 34.90  | 34.92 | 34.91  | 34.81  | 34.56 | 34.43 |
|                | 30           | 34.89     | 34.90  | 34.92 | 34.90  | 34.81  | 34.58 | 34.49 |
|                | 50           | 34.89     | 34.91  | 34.91 | 34.90  | 34.80  | 34.59 | —     |
|                | 75           | 34.88     | 34.90  | 34.91 | 34.88  | 34.80  | —     | —     |
|                | 100          | —         | 34.90  | 34.90 | —      | —      | —     | —     |
|                | Botm.        | 34.88     | 34.92  | 34.91 | 34.93  | 34.80  | 34.57 | 34.39 |
| Depth (m)      |              | 182       | 142    | 130   | 112    | 98     | 84    | 65    |
| Secchi (m)     |              | —         | —      | 20    | 23     | 7      | —     | —     |
| Color          |              | —         | —      | 3     | 3      | 3      | —     | —     |
| Sea            |              | 6         | 2      | 1     | 1      | 1      | 1     | 1     |
| Swell          |              | 3         | 1      | 1     | 1      | 1      | 1     | 1     |
| Air Temp. (°C) |              | 13.5      | 12.8   | 14.0  | 11.2   | 12.0   | 10.5  | 9.0   |
| Baro. (mm)     |              | 760       | 760    | 761   | 766    | 766    | 770   | 771   |
| Wind           |              | W. 1      | W. 1   | SW. 1 | SW. 1  | SW. 2  | NW. 1 | NW. 1 |
| Cloud          |              | Cs. 8     | St. 10 | St. 9 | St. 10 | As. 10 | St. 6 | Ns. 6 |
| Weather        |              | C         | C      | C     | C      | C      | BC    | BC    |

# 315선 해양관측성적

Oceanographic Data, Line 315

| Date           |              | ① August |       |       |       |       |       |       |       |
|----------------|--------------|----------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 06       | 08    | 10    | 12    | 14    | 16    | 18    | 20    |
| Day            |              | 27       | 27    | 27    | 27    | 26    | 26    | 26    | 26    |
| Item           | Time<br>Z(m) | 0610     | 0345  | 1125  | 1419  | 1450  | 1235  | 1018  | 0827  |
| T<br>°C        | 0            | 28.60    | 27.70 | 28.80 | 28.40 | 28.45 | 28.30 | 27.30 | 26.90 |
|                | 10           | 27.44    | 27.35 | 28.88 | 28.52 | 27.85 | 27.95 | 26.93 | 26.30 |
|                | 20           | 27.44    | 27.32 | 28.65 | 28.72 | 27.42 | 28.48 | 24.18 | 20.13 |
|                | 30           | 26.02    | 26.47 | 28.32 | 29.07 | 17.60 | 24.87 | 19.72 | 19.70 |
|                | 50           | 22.25    | 21.99 | 25.00 | 21.06 | 15.64 | 15.12 | 16.21 | 13.66 |
|                | 75           | 18.14    | 18.49 | 21.63 | 17.20 | 16.56 | 15.61 | 14.22 | —     |
|                | 100          | 16.15    | 17.84 | 19.05 | 17.89 | 15.57 | —     | —     | —     |
|                | 125          | 15.55    | 15.35 | 17.24 | 15.32 | —     | —     | —     | —     |
|                | 150          | 13.78    | 14.48 | —     | —     | —     | —     | —     | —     |
|                | 200          | 12.62    | 12.17 | —     | —     | —     | —     | —     | —     |
| Botm.          |              | —        | —     | —     | —     | —     | —     | —     | —     |
| S<br>‰         | 0            | 31.92    | 31.17 | 32.41 | 30.00 | 29.61 | 30.42 | 28.90 | 28.08 |
|                | 10           | 31.86    | 31.37 | 32.36 | 30.65 | 30.04 | 30.76 | 28.79 | 28.22 |
|                | 20           | 31.86    | 31.46 | 33.17 | 31.83 | 30.69 | 32.34 | 30.46 | 31.23 |
|                | 30           | 32.55    | 32.22 | 33.47 | 33.25 | 32.41 | 32.43 | 31.80 | 31.48 |
|                | 50           | 33.89    | 33.84 | 34.14 | 33.64 | 33.26 | 32.44 | 32.32 | 33.12 |
|                | 75           | 34.54    | 34.32 | 34.58 | 33.99 | 34.13 | 32.70 | 33.23 | —     |
|                | 100          | 34.63    | 34.58 | 34.44 | 34.39 | 33.30 | —     | —     | —     |
|                | 125          | 34.65    | 34.65 | 34.63 | 34.63 | —     | —     | —     | —     |
|                | 150          | 34.59    | 34.62 | —     | —     | —     | —     | —     | —     |
|                | 200          | 34.59    | 34.54 | —     | —     | —     | —     | —     | —     |
| Botm.          |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Depth (m)      |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Secchi (m)     |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Color          |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Sea            |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Swell          |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Air Temp. (°C) |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Baro. (mm)     |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Wind           |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Cloud          |              | —        | —     | —     | —     | —     | —     | —     | —     |
| Weather        |              | —        | —     | —     | —     | —     | —     | —     | —     |

# 314선 해양관측성적

Oceanographic Data, Line 314

| Date           |              | ① March |       |       |       |       |       |       |        |
|----------------|--------------|---------|-------|-------|-------|-------|-------|-------|--------|
| Sta. No.       |              | 02      | 03    | 04    | 05    | 06    | 07    | 08    | 09     |
| Day            |              | 21      | 21    | 21    | 21    | 22    | 22    | 22    | 22     |
| Item           | Time<br>Z(m) | 1720    | 1920  | 2235  | 2330  | 0140  | 0330  | 0530  | 0735   |
| T<br>℃         | 0            | 15.20   | 15.50 | 15.80 | 14.99 | 14.41 | 14.20 | 14.04 | 13.21  |
|                | 10           | 14.85   | 15.46 | 15.51 | 14.96 | 14.22 | 14.22 | 13.63 | 13.10  |
|                | 25           | 15.02   | 15.51 | 15.71 | 15.00 | 14.45 | 14.24 | 13.92 | 13.23  |
|                | 50           | 15.15   | 15.60 | 15.43 | 14.91 | 14.33 | 14.32 | 14.02 | 13.21  |
|                | 100          | 15.14   | 15.56 | —     | 14.58 | 14'22 | 14.32 | —     | —      |
|                | Botm.        | 15.14   | 15.53 | 15.30 | 14.55 | 14.22 | —     | 14.00 | 13.13  |
| S<br>‰         | 0            | 34.72   | 34.67 | 34.72 | 34.72 | 34.72 | 34.72 | 34.74 | 34.74  |
|                | 10           | 34.67   | 34.67 | 34.67 | 34.65 | 34.67 | 34.74 | 34.67 | 34.72  |
|                | 25           | 34.67   | 34.67 | 34.67 | 34.65 | 34.67 | 34.74 | 34.67 | 34.67  |
|                | 50           | 34.67   | 34.70 | 34.67 | 34.63 | 34.67 | 34.69 | 34.67 | 34.67  |
|                | 100          | 34.70   | 34.69 | —     | 34.63 | 34.67 | 34.69 | —     | —      |
|                | Botm.        | 34.69   | 34.67 | 34.67 | 34.63 | 34.67 | —     | 34.69 | 34.67  |
| Depth (m)      |              | 117     | 107   | 108   | 110   | 110   | 100   | 100   | 90     |
| Secchi (m)     |              | 10      | —     | —     | —     | —     | —     | —     | —      |
| Color          |              | —       | —     | —     | —     | —     | —     | —     | —      |
| Sea            |              | 3       | 3     | 3     | 3     | 3     | 3     | 4     | 4      |
| Swell          |              | 1       | 1     | 1     | 1     | 1     | 1     | 2     | 2      |
| Air Temp. (°C) |              | 10.2    | 11.0  | 11.5  | 10.7  | 8.4   | 8.3   | 9.4   | 9.7    |
| Baro. (mm)     |              | —       | —     | —     | —     | —     | —     | —     | —      |
| Wind           |              | N. 3    | N. 3  | N. 3  | N. 2  | N. 3  | N. 3  | N. 3  | N. 3   |
| Cloud          |              | Cs. 7   | Cs. 4 | Cs. 4 | Cs. 7 | Cs. 5 | Cs. 5 | Cs. 6 | As. 10 |
| Weather        |              | BC      | BC    | BC    | BC    | BC    | BC    | BC    | C      |

| Date           |              | ② May  |        |        |       |       |       | April |
|----------------|--------------|--------|--------|--------|-------|-------|-------|-------|
| Sta. No.       |              | 02     | 03     | 04     | 05    | 06    | 07    | 08    |
| Day            |              | 1      | 1      | 1      | 1     | 1     | 1     | 30    |
| Item           | Time<br>Z(m) | 1020   | 0830   | 0620   | 0425  | 0220  | 0010  | 2210  |
| T<br>°C        | 0            | 17.9   | 17.8   | 16.9   | 16.2  | 16.0  | 15.7  | 15.2  |
|                | 10           | 18.04  | 17.94  | 16.97  | 16.29 | 16.23 | 15.70 | 14.95 |
|                | 20           | —      | —      | —      | —     | —     | —     | —     |
|                | 25           | 17.93  | 18.02  | 16.94  | 16.33 | 16.21 | 15.65 | 14.80 |
|                | 30           | —      | —      | —      | —     | —     | —     | —     |
|                | 50           | 17.59  | 16.84  | 16.30  | 15.87 | 14.87 | 15.44 | 14.13 |
|                | 75           | —      | —      | —      | —     | —     | —     | —     |
|                | 100          | 16.82  | 16.21  | —      | —     | —     | —     | —     |
|                | Botm.        | 16.11  | 15.47  | 14.40  | 14.09 | 14.13 | 14.10 | 14.00 |
| S<br>‰         | 0            | 34.42  | 34.49  | 34.51  | 34.67 | 34.67 | 34.65 | 34.56 |
|                | 10           | 34.36  | 34.47  | 34.32  | 34.65 | 34.61 | 34.65 | 34.58 |
|                | 20           | —      | —      | —      | —     | —     | —     | —     |
|                | 25           | 34.33  | 34.42  | 34.51  | 34.63 | 34.56 | 34.60 | 34.58 |
|                | 30           | —      | —      | —      | —     | —     | —     | —     |
|                | 50           | 34.72  | 34.61  | 34.52  | 34.61 | 34.52 | 34.56 | 34.63 |
|                | 75           | —      | —      | —      | —     | —     | —     | —     |
|                | 100          | 34.67  | 34.67  | —      | —     | —     | —     | —     |
|                | Botm.        | 34.65  | 34.65  | 34.65  | 34.61 | 34.52 | 34.56 | 34.69 |
| Depth (m)      |              | 120    | 110    | 100    | 100   | 104   | 66    | 82    |
| Secchi (m)     |              | —      | 13     | —      | —     | —     | —     | —     |
| Color          |              | —      | —      | —      | —     | —     | —     | —     |
| Sea            |              | 1      | 1      | 1      | 1     | 1     | 1     | 1     |
| Swell          |              | 1      | 1      | 1      | 1     | 1     | 2     | 2     |
| Air Temp. (°C) |              | 15.1   | 15.4   | 14.0   | 14.5  | 13.5  | 14.2  | 14.5  |
| Baro. (mm)     |              | —      | —      | —      | —     | —     | —     | —     |
| Wind           |              | NNW. 1 | NNW. 1 | W. 1   | N. 1  | N. 1  | S. 1  | S. 1  |
| Cloud          |              | Cs. 3  | Cs. 3  | As. 10 | Cl. 1 | As. 4 | St. 4 | St. 9 |
| Weather        |              | BC     | BC     | C      | B     | BC    | BC    | C     |

③ June

| 02    | 03    | 04    | 05    | 06    | 07    | 08       |
|-------|-------|-------|-------|-------|-------|----------|
| 14    | 14    | 14    | 14    | 15    | 15    | 15       |
| 1950  | 1445  | 2340  | 0205  | 0320  | 0515  | 0700     |
| 20.6  | 20.6  | 20.2  | 19.9  | 19.8  | 19.7  | 20.0     |
| 20.71 | 20.61 | 19.93 | 19.97 | 19.52 | 19.71 | 19.80    |
| 20.23 | 19.90 | 19.53 | 19.81 | 19.59 | 18.05 | 17.98    |
| —     | —     | —     | —     | —     | —     | —        |
| 19.08 | 18.29 | 15.78 | 17.38 | 15.84 | 15.87 | 14.79    |
| 16.42 | 14.46 | 13.54 | 14.32 | 14.26 | 14.62 | 13.12    |
| 14.60 | 14.74 | 13.09 | 13.09 | 13.41 | 13.53 | 12.88    |
| 15.03 | —     | —     | 13.05 | 13.34 | —     | —        |
| 14.12 | 14.64 | 12.83 | 13.00 | —     | 13.55 | 12.91    |
| 34.12 | 34.08 | 33.90 | 33.87 | 34.51 | 33.88 | 33.68    |
| 34.11 | 33.93 | 33.89 | 33.81 | 33.85 | 33.90 | 33.65    |
| 34.07 | 33.83 | 34.46 | 33.83 | 33.83 | 33.91 | 33.83    |
| —     | —     | —     | —     | —     | —     | —        |
| 34.12 | 34.00 | 33.84 | 33.93 | 33.85 | 34.31 | 34.21    |
| 34.16 | 34.24 | 34.06 | 34.37 | 34.08 | 34.53 | 34.42    |
| 34.28 | 34.44 | 34.43 | 33.94 | 34.35 | 34.55 | 34.44    |
| 34.18 | —     | —     | 34.46 | 34.52 | —     | —        |
| 34.18 | 34.47 | 34.09 | 34.49 | —     | 34.59 | 34.53    |
| 116   | 104   | 102   | 110   | 100   | 100   | 100      |
| —     | —     | —     | —     | —     | 10    | 24       |
| —     | —     | —     | —     | —     | —     | —        |
| 3     | 1     | 1     | 3     | 4     | 3     | 3        |
| 1     | 1     | 0     | 1     | 2     | 2     | 1        |
| 21.0  | 20.7  | 20.5  | 20.04 | 20.4  | 19.8  | 20.5     |
| —     | —     | —     | —     | —     | —     | —        |
| NE. 3 | E. 2  | E. 2  | E. 4  | E. 4  | E. 4  | SE. S. 3 |
| Ci. 1 | Ci. 1 | 0     | Cc. 9 | Cc. 7 | Cc. 2 | Cc. 2    |
| B     | B     | B     | C     | BC    | B     | B        |

| Date           |      | ④ August |       |       |       |       |
|----------------|------|----------|-------|-------|-------|-------|
| Sta. No.       |      | 00       | 01    | 02    | 03    | 04    |
| Day            |      | 16       | 16    | 16    | 16    | 16    |
| Item           | Time | 0820     | 1058  | 1312  | 1530  | 1817  |
|                | Z(m) |          |       |       |       |       |
| T<br><br>C     | 0    | 28.50    | 28.30 | 28.20 | 28.40 | 28.45 |
|                | 10   | 28.64    | 28.12 | 28.31 | 27.85 | 26.98 |
|                | 20   | 28.35    | 28.37 | 29.92 | 24.33 | 19.61 |
|                | 30   | 28.36    | 28.08 | 26.60 | 19.49 | 18.98 |
|                | 50   | 24.46    | 22.15 | 16.44 | 17.33 | 18.11 |
|                | 75   | 18.59    | 19.75 | 18.40 | 15.65 | 16.04 |
|                | 100  | 17.28    | 18.01 | 15.64 | 15.23 | 15.24 |
|                | 125  | 15.44    | 15.18 | —     | —     | —     |
| Botm.          |      | —        | —     | —     | —     | —     |
| S<br><br>‰     | 0    | 31.33    | 30.68 | 29.84 | 30.05 | 29.80 |
|                | 10   | 31.33    | 30.71 | 31.20 | 29.97 | 29.79 |
|                | 02   | 31.86    | 32.04 | 32.75 | 31.52 | 32.66 |
|                | 30   | 32.22    | 32.83 | 32.91 | 32.86 | 34.56 |
|                | 50   | 33.47    | 32.94 | 33.53 | 34.14 | 34.48 |
|                | 75   | 34.39    | 34.50 | 34.57 | 34.05 | 34.65 |
|                | 100  | 34.50    | 34.57 | 34.63 | 34.65 | 34.64 |
|                | 125  | 34.50    | 34.56 | —     | —     | —     |
| Botm.          |      | —        | —     | —     | —     | —     |
| Depth (m)      |      | —        | —     | —     | —     | —     |
| Secchi (m)     |      | —        | —     | —     | —     | —     |
| Color          |      | —        | —     | —     | —     | —     |
| Sea            |      | —        | —     | —     | —     | —     |
| Swell          |      | —        | —     | —     | —     | —     |
| Air Temp. (°C) |      | —        | —     | —     | —     | —     |
| Baro. (mm)     |      | —        | —     | —     | —     | —     |
| Wind           |      | —        | —     | —     | —     | —     |
| Cloud          |      | —        | —     | —     | —     | —     |
| Weather        |      | —        | —     | —     | —     | —     |

[illegible]



| Date           |              | (5) October |       |       |       |        |       |       |
|----------------|--------------|-------------|-------|-------|-------|--------|-------|-------|
| Sta. No.       |              | 02          | 03    | 04    | 05    | 06     | 07    | 08    |
| Day            |              | 10          | 10    | 10    | 10    | 10     | 11    | 11    |
| Item           | Time<br>Z(m) | 1550        | 1740  | 1945  | 2150  | 2340   | 0150  | 0400  |
| T<br>°C        | 0            | 24.21       | 23.71 | 23.40 | 23.00 | 23.10  | 20.42 | 21.70 |
|                | 10           | 24.32       | 23.70 | 23.77 | 24.35 | 23.41  | 21.72 | 21.53 |
|                | 20           | 24.28       | 23.81 | 23.91 | 24.42 | 23.54  | 21.89 | 22.38 |
|                | 30           | 24.14       | 23.82 | 23.87 | 24.45 | 23.54  | 23.33 | 22.07 |
|                | 50           | 23.61       | 23.76 | 23.91 | 24.43 | 21.69  | 17.90 | 22.48 |
|                | 75           | 19.57       | 21.92 | 21.17 | 19.43 | 17.33  | 16.64 | 18.02 |
|                | 100          | 16.98       | —     | 17.59 | —     | —      | —     | —     |
|                | Botm.        | 15.57       | 17.63 | —     | 17.00 | 16.48  | 16.69 | 14.56 |
| S<br>‰         | 0            | 34.16       | 33.97 | 34.21 | 34.23 | 34.00  | 32.59 | 32.15 |
|                | 10           | 34.12       | 34.00 | 34.06 | 34.28 | 34.02  | 32.56 | 32.28 |
|                | 20           | 34.11       | 33.99 | 34.05 | 34.28 | 34.03  | 32.57 | 32.98 |
|                | 30           | 34.07       | 33.99 | 34.05 | 34.28 | 34.03  | 32.88 | 33.54 |
|                | 50           | 33.94       | 34.00 | 34.05 | 34.29 | 34.18  | 33.39 | 33.67 |
|                | 75           | 34.17       | 34.24 | 34.31 | 34.40 | 34.61  | 34.32 | 33.04 |
|                | 100          | 34.74       | —     | 34.72 | —     | —      | —     | —     |
|                | Botm.        | 34.75       | 34.73 | —     | 34.75 | 34.63  | 34.50 | 33.94 |
| Depth (m)      |              | 120         | 110   | 105   | 105   | 115    | 104   | 98    |
| Secchi (m)     |              | 18          | 20    | —     | —     | —      | —     | —     |
| Color          |              | —           | —     | —     | —     | —      | —     | —     |
| Sea            |              | 0           | 0     | 0     | 0     | 2      | 2     | 2     |
| Swell          |              | 0           | 0     | 1     | 1     | 1      | 1     | 1     |
| Air Temp. (°C) |              | 21.5        | 21.5  | 21.2  | 21.4  | 21.7   | 21.2  | 21.8  |
| Baro. (mm)     |              | —           | —     | —     | —     | —      | —     | —     |
| Wind           |              | SW. 2       | E. 2  | NE. 3 | NE. 3 | ESE. 1 | E. 3  | E. 3  |
| Cloud          |              | St. 6       | St. 7 | St. 7 | St. 7 | St. 8  | St. 8 | St. 8 |
| Weather        |              | BC          | BC    | BC    | BC    | C      | C     | C     |

| December | ⑥ December |       |       |        |       |       |
|----------|------------|-------|-------|--------|-------|-------|
| 04       | 05         | 06    | 07    | 08     | 09    | 10    |
| 29       | 2          | 2     | 2     | 2      | 2     | 2     |
| 1230     | 1045       | 1215  | 1405  | 1535   | 1725  | 1900  |
| 18.00    | 16.10      | 16.30 | 16.70 | 16.50  | 16.50 | 16.20 |
| 17.60    | —          | 16.48 | —     | 16.40  | —     | 15.90 |
| 17.63    | —          | 16.53 | —     | 16.42  | —     | 15.96 |
| 17.60    | —          | 16.56 | —     | 16.45  | —     | 15.99 |
| 17.72    | —          | 16.60 | —     | 16.43  | —     | 16.00 |
| —        | —          | 16.55 | —     | 16.41  | —     | —     |
| —        | —          | —     | —     | —      | —     | —     |
| 17.71    | —          | 16.57 | —     | 16.37  | —     | 16.00 |
| 34.77    | —          | 34.83 | —     | 34.79  | —     | 34.62 |
| 34.76    | —          | 34.80 | —     | 34.78  | —     | 34.59 |
| 34.76    | —          | 34.80 | —     | 34.78  | —     | 34.59 |
| 34.77    | —          | 34.78 | —     | 34.75  | —     | 34.60 |
| 34.76    | —          | 34.80 | —     | 34.75  | —     | 34.63 |
| —        | —          | 34.81 | —     | 34.76  | —     | —     |
| —        | —          | —     | —     | —      | —     | —     |
| 34.76    | —          | 34.81 | —     | 34.75  | —     | 34.64 |
| 105      | 104        | 108   | 108   | 100    | 96    | 84    |
| 7.5      | —          | 5.5   | —     | 6      | —     | —     |
| 5        | 4          | 3     | 2     | 4      | 3     | 1     |
| 3        | 1          | 2     | 1     | 1      | 1     | 3     |
| 3        | 3          | 2     | 2     | 2      | 2     | 1     |
| 11.0     | 7.2        | 10.5  | 10.1  | 49.5   | 6.5   | 8.5   |
| 770      | 770        | 771   | 771   | 771    | 771   | 779   |
| NE. 6    | NW. 2      | NW. 4 | NW. 3 | NW. 8  | NW. 5 | NW. 2 |
| Cu. 7    | Cu. 7      | Cu. 8 | Cu. 8 | Cu. 10 | Cu. 8 | St. 6 |
| BC       | BC         | C     | C     | C      | C     | BC    |

## 313선 해양관측성적

Oceanographic Data, Line 313

| Date           |              | ① March |       |       |       | ② April |       |       |
|----------------|--------------|---------|-------|-------|-------|---------|-------|-------|
| Sta. No.       |              | 02      | 03    | 04    | 05    | 02      | 03    | 04    |
| Day            |              | 22      | 22    | 22    | 22    | 30      | 30    | 30    |
| Item           | Time<br>Z(m) | 1505    | 1340  | 1200  | 1025  | 1625    | 1750  | 1910  |
| T<br>°C        | 0            | 14.00   | 13.88 | 13.62 | 13.32 | 15.6    | 15.8  | 15.7  |
|                | 10           | 13.71   | 13.31 | 13.51 | 13.35 | 16.12   | 15.41 | 15.20 |
|                | 20           | —       | —     | —     | —     | —       | —     | —     |
|                | 25           | 13.82   | 13.57 | 13.62 | 13.39 | 16.00   | 15.34 | 14.70 |
|                | 30           | —       | —     | —     | —     | —       | —     | —     |
|                | 50           | 13.91   | 13.70 | 13.59 | 13.40 | 14.88   | 15.06 | 14.08 |
|                | 75           | —       | —     | —     | —     | —       | —     | —     |
|                | Botm.        | 13.90   | 13.72 | 13.59 | 13.39 | 14.59   | 14.07 | 14.00 |
| S<br>‰         | 0            | 34.69   | 34.65 | 34.69 | 34.74 | 34.60   | 34.67 | 34.54 |
|                | 10           | 34.67   | 34.67 | 34.67 | 34.74 | 34.58   | 34.67 | 34.56 |
|                | 20           | —       | —     | —     | —     | —       | —     | —     |
|                | 25           | 34.67   | 34.67 | 34.70 | 34.74 | 34.61   | 34.63 | 34.63 |
|                | 30           | —       | —     | —     | —     | —       | —     | —     |
|                | 50           | 34.67   | 34.67 | 34.67 | 34.74 | 34.63   | 34.67 | 34.65 |
|                | 75           | —       | —     | —     | —     | —       | —     | —     |
|                | Botm.        | 34.67   | 34.67 | 34.65 | 34.74 | 34.67   | 34.60 | 34.65 |
| Depth (m)      |              | 95      | 95    | 83    | 86    | 88      | 84    | 95    |
| Secchi (m)     |              | 5       | 5.5   | 4     | 3     | 5       | 8     | —     |
| Color          |              | —       | —     | —     | —     | —       | —     | —     |
| Sea            |              | 2       | 2     | 3     | 3     | 1       | 1     | 1     |
| Swell          |              | 1       | 1     | 1     | 1     | 2       | 2     | 2     |
| Air Temp. (°C) |              | 9.9     | 10.5  | 9.3   | 9.4   | 14.0    | 13.0  | 13.5  |
| Baro. (mm)     |              | —       | —     | —     | —     | —       | —     | —     |
| Wind           |              | N. 2    | N. 2  | N. 2  | N. 2  | NW. 1   | NW. 1 | NW. 1 |
| Cloud          |              | As. 9   | As. 9 | As. 9 | As. 9 | Cc. 4   | Cc. 4 | As. 5 |
| Weather        |              | C       | C     | C     | C     | BC      | BC    | BC    |

| ③ June |        |       |       |       |  |
|--------|--------|-------|-------|-------|--|
| 02     | 03     | 04    | 02    | 03    |  |
| 15     | 15     | 15    | 14    | 14    |  |
| 1255   | 1145   | 0105  | 0010  | 0253  |  |
| 23.3   | 20.2   | 19.9  | 26.38 | 26.31 |  |
| 19.49  | 19.91  | 19.24 | 25.93 | 26.15 |  |
| 18.82  | 18.94  | 19.91 | 17.81 | 17.00 |  |
| —      | —      | —     | —     | —     |  |
| 17.30  | 17.52  | 18.11 | 13.54 | 14.61 |  |
| 15.75  | 14.76  | 17.27 | 13.02 | 12.98 |  |
| 14.63  | 14.03  | 14.22 | 13.08 | 13.17 |  |
| 14.62  | 14.04  | 13.84 | 13.07 | 13.05 |  |
| 33.85  | 33.80  | 33.95 | 30.07 | 30.58 |  |
| 33.93  | 33.79  | 33.82 | 30.14 | 30.53 |  |
| 34.10  | 33.82  | 33.82 | 32.09 | 32.89 |  |
| —      | —      | —     | —     | —     |  |
| 34.18  | 33.99  | 34.10 | 32.71 | 33.54 |  |
| 34.28  | 34.94  | 34.48 | 34.19 | 34.24 |  |
| 34.43  | 34.82  | 34.59 | 34.24 | 34.28 |  |
| 34.45  | 34.52  | 34.57 | 34.24 | 34.28 |  |
| 90     | 92     | 94    | 96    | 90    |  |
| 25     | 25     | 25    | —     | —     |  |
| —      | —      | —     | —     | —     |  |
| 1      | 2      | 2     | 1.5   | 1.5   |  |
| 1      | 1      | 1     | —     | —     |  |
| 21.5   | 21.4   | 20.7  | 26.5  | 26.5  |  |
| —      | —      | —     | 1014  | 1013  |  |
| ESE. 2 | ESE. 2 | NE. 3 | SW. 2 | SW. 2 |  |
| St. 2  | St. 4  | Ci. 2 | Sc. 7 | Sc. 7 |  |
| B      | BC     | B     | BC    | BC    |  |

| Date           |       | ④ August |        |        |        |        |        |
|----------------|-------|----------|--------|--------|--------|--------|--------|
| Sta. No.       |       | 04       | 05     | 06     | 07     | 08     | 09     |
| Day            |       | 14       | 14     | 14     | 14     | 14     | 14     |
| Item           | Time  | 0454     | 0630   | 0806   | 0925   | 1200   | 1335   |
|                | Z(m)  |          |        |        |        |        |        |
| T<br>°C        | 0     | 24.46    | 26.31  | 26.30  | 26.40  | 26.71  | 27.30  |
|                | 10    | 26.30    | 26.35  | 25.00  | 25.67  | 25.08  | 25.90  |
|                | 20    | 14.53    | 15.72  | 15.12  | 16.00  | 19.14  | 15.84  |
|                | 30    | 13.40    | 13.75  | 13.80  | 13.81  | 14.01  | 14.00  |
|                | 50    | 13.48    | 13.56  | 13.78  | 13.49  | 13.93  | 13.90  |
|                | 75    | 13.35    | —      | —      | 13.68  | —      | —      |
|                | Botm. | 13.45    | 13.52  | 13.60  | 13.76  | 13.03  | 13.99  |
| S<br>‰         | 0     | 30.96    | 31.12  | 31.57  | 31.33  | 31.25  | 31.26  |
|                | 10    | 30.92    | 31.08  | 31.24  | 31.32  | 31.63  | 31.29  |
|                | 20    | 33.00    | 32.26  | 33.60  | 33.89  | 33.23  | 33.10  |
|                | 30    | 33.66    | 34.15  | 34.34  | 34.42  | 34.43  | 34.38  |
|                | 50    | 34.45    | 34.42  | 34.40  | 34.44  | 34.46  | 34.40  |
|                | 75    | 34.44    | —      | —      | 34.44  | —      | —      |
|                | Botm. | 34.44    | 34.43  | 34.40  | 34.44  | 34.46  | 34.40  |
| Depth (m)      |       | 85       | 80     | 77     | 83     | 73     | 74     |
| Secchi (m)     |       | —        | —      | 16     | 20     | 19     | 19     |
| Color          |       | —        | —      | —      | —      | —      | —      |
| Sea            |       | 3        | 2      | 3.5    | 3      | 2.5    | 2      |
| Swell          |       | —        | —      | —      | —      | —      | —      |
| Air Temp. (mm) |       | 26.5     | 26.5   | 27.0   | 27.2   | 28.5   | 28.7   |
| Baro. (mm)     |       | 1013     | 1014   | 1013   | 1013   | 1013   | 1013   |
| Wind           |       | SW. 2    | SW. 1  | S. 1   | W. 1   | SSE. 1 | SSW. 1 |
| Cloud          |       | Sc. 10   | Sc. 10 | As. 10 | Sc. 10 | As. 6  | Ci. 6  |
| Weather        |       | C        | C      | C      | C      | BC     | BC     |

| ⑤ October |       |       | ⑥ December |       |        |        |        |        |
|-----------|-------|-------|------------|-------|--------|--------|--------|--------|
| 02        | 03    | 04    | 02         | 03    | 04     | 05     | 06     | 07     |
| 11        | 11    | 11    | 25         | 25    | 25     | 25     | 25     | 25     |
| 1005      | 0845  | 0705  | 2350       | 2230  | 2025   | 1905   | 1745   | 1540   |
| 20.32     | 20.72 | 21.50 | 16.30      | 16.50 | 16.10  | 15.50  | 15.30  | 15.00  |
| 20.96     | 21.67 | 21.61 | 16.30      | 16.39 | 15.97  | 15.66  | 15.35  | 15.10  |
| 22.55     | 22.04 | 22.14 | 16.31      | 16.39 | 16.01  | 15.72  | 15.36  | 15.10  |
| 22.43     | 21.89 | 21.31 | 16.32      | 16.32 | 15.95  | 15.69  | 15.38  | 15.09  |
| 16.04     | 19.58 | 13.02 | 16.30      | 16.42 | 16.00  | 15.69  | 15.39  | 15.12  |
| 18.03     | 16.29 | 13.11 | 16.30      | —     | —      | —      | 15.47  | —      |
| 17.08     | 14.74 | 13.06 | 16.31      | 16.43 | 16.00  | 15.77  | 15.51  | 15.13  |
| 31.88     | 31.80 | 32.69 | 34.75      | 34.74 | 34.67  | 34.60  | 34.43  | 33.33  |
| 32.18     | 32.53 | 32.72 | 34.71      | 34.73 | 34.68  | 34.59  | 34.41  | 33.30  |
| 33.19     | 32.92 | 33.03 | 34.73      | 34.73 | 34.68  | 34.57  | 34.42  | 33.32  |
| 33.27     | 32.90 | 33.06 | 34.74      | 34.74 | 34.68  | 34.28  | 34.41  | 33.31  |
| 32.20     | 33.05 | 33.10 | 34.75      | 34.71 | 34.69  | 34.59  | 34.43  | 33.32  |
| 34.15     | 34.22 | 33.89 | 34.73      | —     | —      | —      | 34.46  | —      |
| 34.37     | 34.08 | 33.91 | 34.38      | 34.73 | 34.67  | 34.61  | 34.47  | 33.31  |
| 90        | 86    | 95    | 94         | 91    | 85     | 82     | 94     | 84     |
| 19        | 16    | —     | —          | —     | —      | —      | —      | 1.5    |
| —         | —     | —     | —          | —     | —      | —      | —      | —      |
| 2         | 2     | 2     | 0          | 0     | 0      | 1      | 2      | 2      |
| 2         | 2     | 1     | 1          | 1     | 1      | 1      | —      | 2      |
| 21.2      | 21.3  | 21.2  | 8.4        | 9.4   | 7.0    | 8.0    | 6.5    | 6.5    |
| —         | —     | —     | 770        | 770   | 770    | 770    | 770    | 770    |
| NE.       | ENE   | E. 1  | NW. 1      | NW. 1 | NW. 1  | NW. 1  | NW. 3  | NW. 2  |
| St. 6     | St. 7 | St. 8 | As. 8      | As. 8 | Sc. 10 | Sc. 10 | Sc. 10 | Sc. 10 |
| BC        | C     | C     | C          | C     | C      | C      | C      | C      |

## 312선 해양관측성적

Oceanographic Data, Line 312

| Date           |       | ① February |        |        |        |        |        |        |        |
|----------------|-------|------------|--------|--------|--------|--------|--------|--------|--------|
| Sta. No.       |       | 02         | 05     | 04     | 05     | 06     | 07     | W3     | W4     |
| Day            |       | 17         | 17     | 17     | 17     | 17     | 17     | 18     | 17     |
| Item           | Time  | 0840       | 1030   | 1235   | 1440   | 1630   | 1930   | 0930   | 2130   |
|                | Z(m)  |            |        |        |        |        |        |        |        |
| T<br>C         | 0     | 8.20       | 7.50   | 7.30   | 7.50   | 7.50   | 7.50   | 6.50   | 7.25   |
|                | 10    | 7.78       | 7.41   | 7.08   | 7.26   | 6.93   | 7.13   | 6.16   | 7.21   |
|                | 25    | 7.69       | 7.40   | 6.95   | 7.12   | 6.75   | 7.14   | 6.10   | 7.17   |
|                | 50    | 7.98       | 7.38   | 6.87   | 7.10   | 6.70   | 7.18   | —      | 7.11   |
|                | Botm. | 7.97       | 7.35   | 6.86   | 6.92   | 6.69   | 7.08   | 6.01   | 6.95   |
| S<br>‰         | 0     | 32.95      | 32.99  | 32.94  | 32.92  | 32.81  | 32.79  | 32.92  | 32.97  |
|                | 10    | 32.95      | 32.95  | 32.88  | 32.88  | 33.04  | 32.83  | 32.88  | 33.01  |
|                | 25    | 32.86      | 32.88  | 32.85  | 32.86  | 32.88  | 32.90  | 32.90  | 33.04  |
|                | 50    | 33.06      | 32.99  | 32.88  | 32.88  | 32.88  | 32.86  | 32.88  | 33.04  |
|                | Botm. | 33.08      | 32.99  | 34.49  | 32.81  | 32.92  | 32.90  | 32.90  | 32.99  |
| Depth (m)      |       | 72         | 65     | 75     | 85     | 90     | 92     | 52     | 75     |
| Secchi (m)     |       | 2.5        | 1.5    | 1.5    | 2      | —      | 1.5    | —      | —      |
| Color          |       | —          | —      | —      | —      | —      | —      | —      | —      |
| Sea            |       | 3          | 3      | 4      | 4      | 4      | 4      | 3      | 3      |
| Swell          |       | 2          | 2      | 3      | 3      | 3      | 2      | 2      | 3      |
| Air Temp. (°C) |       | 8.9        | 8.5    | 8.0    | 6.1    | 7.7    | 6.5    | 8.5    | 7.3    |
| Baro. (mm)     |       | —          | —      | —      | —      | —      | —      | —      | —      |
| Wind           |       | NE. 4      | NE. 4  | NE. 4  | NE. 4  | NE. 4  | NE. 5  | NE. 2  | NE. 4  |
| Cloud          |       | Cu. 10     | Cu. 10 | Cu. 10 | Cu. 10 | Cu. 10 | Cu. 10 | Cu. 10 | Cu. 10 |
| Weather        |       | C          | C      | C      | C      | C      | C      | C      | C      |



## ② April

| 02     | 03    | 04    | 05    | 06    | 07    | 08    | W4     | W3     |
|--------|-------|-------|-------|-------|-------|-------|--------|--------|
| 8      | 8     | 8     | 8     | 8     | 9     | 9     | 9      | 9      |
| 1520   | 1645  | 1825  | 2010  | 2200  | 0710  | 0840  | 1150   | 1435   |
| 11.50  | 9.10  | 9.20  | 8.10  | 7.30  | 7.80  | 7.90  | 7.40   | 8.70   |
| 10.87  | 7.46  | 7.41  | 7.52  | 6.91  | 7.14  | 7.60  | 6.41   | 6.95   |
| 10.93  | 7.49  | 7.70  | 7.61  | 6.61  | 7.47  | 7.59  | 6.75   | 6.24   |
| —      | 10.75 | 7.65  | 7.79  | 8.90  | 7.75  | 8.01  | 6.18   | —      |
| 10.93  | 10.76 | 8.09  | 7.89  | 10.83 | 7.77  | 8.17  | 6.66   | 6.31   |
| 34.24  | 33.15 | 33.15 | 33.15 | 33.21 | 33.03 | 33.08 | 32.95  | 32.81  |
| 34.24  | 33.15 | 33.15 | 33.15 | 33.12 | 33.08 | 33.08 | 32.95  | 32.81  |
| 34.22  | 33.21 | 33.35 | 33.26 | 32.97 | 33.24 | 33.08 | 32.99  | 32.81  |
| —      | 33.21 | 33.35 | 33.42 | 33.77 | 33.22 | 33.26 | 33.15  | —      |
| 34.22  | 33.21 | 33.37 | 33.35 | 34.29 | 33.35 | 33.28 | 33.17  | 32.81  |
| 59     | 70    | 65    | 73    | 90    | 92    | 82    | 73     | 45     |
| 2      | 3     | 2     | —     | —     | 5     | 7     | 3      | 3      |
| —      | —     | —     | —     | —     | —     | —     | —      | —      |
| 2      | 2     | 2     | 2     | 2     | 2     | 2     | 2      | 1      |
| 1      | 1     | 1     | 1     | 1     | 1     | 1     | 1      | 1      |
| 12.5   | 12.0  | 10.4  | 9.1   | 9.0   | 9.1   | 9.1   | 10.0   | 10.1   |
| —      | —     | —     | —     | —     | —     | —     | —      | —      |
| NE. 2  | NE. 2 | NE. 2 | NE. 2 | NE. 2 | NW. 2 | NW. 2 | NW. 2  | NW. 2  |
| Cu. 10 | Cu. 8 | Cu. 8 | Cu. 3 | Cu. 3 | Cu. 9 | Cu. 8 | St. 10 | St. 10 |
| C      | C     | C     | B     | B     | C     | C     | C      | C      |

| Date           |              | ③ June |       |       |       |       |       |       |       |
|----------------|--------------|--------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 02     | 03    | 04    | 05    | 06    | 07    | W4    | W3    |
| Day            |              | 4      | 4     | 4     | 4     | 4     | 4     | 4     | 5     |
| Item           | Time<br>Z(m) | 0840   | 1040  | 1230  | 1420  | 1610  | 1840  | 2100  | 0050  |
| T<br>°C        | 0            | 16.4   | 16.0  | 13.6  | 13.8  | 13.5  | 12.8  | 12.8  | 13.4  |
|                | 10           | 15.65  | 12.93 | 12.71 | 11.51 | 11.53 | 11.95 | 10.52 | 11.40 |
|                | 20           | 14.60  | 12.85 | 12.71 | 11.45 | 11.55 | 11.04 | 10.60 | 11.12 |
|                | 30           | 14.26  | 12.85 | 12.60 | 11.46 | 11.54 | 10.98 | 4.41  | 10.84 |
|                | 50           | 14.06  | 12.41 | 12.43 | 11.38 | 11.46 | 10.90 | —     | —     |
|                | 75           | —      | —     | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 13.50  | 12.18 | 12.06 | 11.30 | 11.46 | 10.89 | 11.36 | 10.63 |
| S<br>‰         | 0            | 32.96  | 34.01 | 34.11 | 33.75 | 33.85 | 33.52 | 32.85 | 33.48 |
|                | 10           | 33.93  | 34.09 | 34.02 | 33.71 | 34.48 | 33.54 | 32.86 | 33.08 |
|                | 20           | 34.25  | 34.13 | 34.07 | 33.79 | —     | 33.39 | 33.07 | 33.12 |
|                | 30           | 34.15  | 34.18 | 34.06 | 33.78 | 33.64 | 33.99 | 33.55 | 33.04 |
|                | 50           | 34.29  | 34.15 | 33.93 | 33.84 | 33.62 | 33.33 | —     | —     |
|                | 75           | —      | —     | —     | —     | —     | —     | —     | —     |
|                | Botm.        | 34.20  | 34.16 | 34.40 | 33.84 | 33.82 | 33.33 | 32.94 | 33.04 |
| Depth (m)      |              | 79     | 63    |       | 75    | 72    | 74    | 58    | 57    |
| Secchi (m)     |              | 10     | 5     | 5     | 5     | 4     | 3     | —     | —     |
| Color          |              | —      | —     | —     | —     | —     | —     | —     | —     |
| Sea            |              | 2      | 3     | 2     | 2     | 3     | 3     | 3     | 3     |
| Swell          |              | 1      | 1     | 1     | 1     | 1     | 2     | 2     | 2     |
| Air Temp. (°C) |              | 18.5   | 20.1  | 19.5  | 18.0  | 17.6  | 17.1  | 15.8  | 10.8  |
| aro. (mm)      |              | —      | —     | —     | —     | —     | —     | —     | —     |
| Wind           |              | W. 4   | W. 2  | W. 3  | W. 3  | NW. 4 | NW. 4 | NW. 4 | NW. 4 |
| Cloud          |              | Ci. 2  | Ci. 2 | Ci. 2 | Ci. 2 | Ci. 2 | Ci. 2 | Ci. 1 | Ci. 1 |
| Weather        |              | B      | B     | B     | B     | B     | B     | B     | B     |

④ August

| 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09     |
|-------|-------|-------|-------|-------|-------|-------|--------|
| 15    | 15    | 15    | 15    | 15    | 14    | 14    | 14     |
| 0830  | 0710  | 0520  | 0330  | 0148  | 2045  | 1922  | 1748   |
| 25.22 | 25.42 | 21.10 | 21.70 | 21.72 | 24.83 | 23.08 | 26.39  |
| 18.66 | 18.53 | 16.63 | 20.40 | 20.00 | 22.14 | 21.32 | 22.58  |
| 17.56 | 14.55 | 15.86 | 18.02 | 17.51 | 20.83 | 17.44 | 18.30  |
| 16.48 | 13.70 | 13.85 | 16.24 | 17.29 | 15.16 | 16.87 | 14.26  |
| 14.33 | 13.72 | 13.54 | 13.68 | 13.49 | 14.18 | 14.04 | 12.52  |
| —     | —     | —     | —     | 13.52 | 11.28 | —     | —      |
| 13.63 | 15.51 | 13.40 | 13.62 | 13.53 | 11.08 | 12.95 | 12.50  |
| 31.35 | 31.66 | 32.84 | 32.74 | 32.54 | 31.91 | 32.22 | 31.90  |
| 33.14 | 32.56 | 33.31 | 32.63 | 32.70 | 32.35 | 32.93 | 32.03  |
| 33.53 | 33.66 | 33.43 | 32.88 | 32.94 | 32.59 | 32.96 | 33.00  |
| 3.31  | 34.22 | 33.66 | 33.36 | 32.97 | 33.31 | 33.15 | 33.97  |
| 34.10 | 34.27 | 34.16 | 34.20 | 33.54 | 33.60 | 33.70 | 33.98  |
| —     | —     | —     | —     | 34.39 | 33.74 | —     | —      |
| 34.29 | 34.26 | 34.19 | 34.24 | 34.40 | 33.72 | 34.11 | 33.97  |
| 80    | 63    | 70    | 80    | 95    | 90    | 84    | 83     |
| 8     | 14    | —     | —     | —     | —     | 13    | 24     |
| 3     | —     | —     | —     | —     | —     | 3     | 3      |
| 2.5   | 2     | 2     | 2.5   | 3     | 2.5   | 1.5   | 2      |
| —     | —     | —     | —     | —     | —     | —     | —      |
| 25.0  | 25.5  | 23.2  | 22.7  | 2.6   | 26.0  | 26.7  | 28.7   |
| 1013  | 1012  | 1012  | 1012  | 1012  | 1012  | 1012  | 1012   |
| E. 1  | E. 1  | SW. 1 | SW. 1 | SW. 1 | SW. 1 | SW. 1 | SSW. 1 |
| Sc. 5 | Cs. 8 | 0     | 0     | 0     | Sc. 2 | 0     | Cu. 3  |
| BC    | C     | B     | B     | B     | B     | B     | BC     |



| ⑥ December |        |        |        |        |
|------------|--------|--------|--------|--------|
| 04         | 05     | 06     | 07     | 08     |
| 22         | 22     | 22     | 25     | 25     |
| 1040       | 1150   | 1320   | 1000   | 1120   |
| 12.00      | 12.00  | 12.20  | 12.40  | 12.80  |
| 12.60      | 11.85  | 11.53  | 12.34  | 12.79  |
| 11.81      | 11.85  | 12.24  | 12.36  | 12.83  |
| 11.75      | 11.35  | 12.10  | 12.35  | 12.80  |
| —          | 10.90  | 12.10  | 12.35  | 12.79  |
| —          | 10.63  | —      | 12.35  | 12.85  |
| 11.80      | 10.33  | 12.14  | 12.38  | 12.84  |
| 33.35      | 33.72  | 33.35  | 33.40  | 33.23  |
| 33.30      | 33.27  | 33.34  | 33.38  | 33.26  |
| 33.30      | 33.28  | 33.34  | 33.39  | 33.27  |
| 33.28      | 33.22  | 33.27  | 33.39  | 33.26  |
| —          | 33.23  | 33.31  | 33.39  | 33.24  |
| —          | 33.20  | —      | 33.39  | 33.26  |
| 33.31      | 33.19  | 33.30  | 33.39  | 33.29  |
| 65         | 92     | 101    | 98     | 95     |
| 0.7        | 1.5    | 2      | 1.5    | 2      |
| 10         | 5      | 3      | 7      | 6      |
| 4          | 5      | 6      | 2      | 2      |
| 1          | 1      | 1      | 2      | 2      |
| 11.9       | 12.5   | 12.2   | 9.4    | 4.5    |
| 761        | 761    | 761    | 770    | 770    |
| NE. 5      | NE. 5  | NE. 7  | NW. 3  | NW. 3  |
| St. 10     | Ns. 10 | Ns. 10 | St. 10 | St. 10 |
| R          | R      | R      | C      | C      |

## 311선 해양관측성적

Oceanographic Data, Line 311

| Date           |       | ① February |       |       |       |       |       |
|----------------|-------|------------|-------|-------|-------|-------|-------|
| Sta. No.       |       | 04         | 05    | 06    | 07    | 08    | W2    |
| Day            |       | 18         | 18    | 18    | 19    | 19    | 19    |
| Item           | Time  | 1125       | 1310  | 1510  | 1720  | 0900  | 1205  |
|                | Z(m)  |            |       |       |       |       |       |
| T<br><br>C     | 0     | 7.10       | 6.50  | 7.00  | 7.00  | 6.80  | 6.70  |
|                | 10    | 6.61       | 6.27  | 6.50  | 6.86  | 6.69  | 6.49  |
|                | 20    | —          | —     | —     | —     | —     | —     |
|                | 25    | 6.16       | 6.26  | 6.40  | 6.69  | 6.48  | 6.43  |
|                | 30    | —          | —     | —     | —     | —     | —     |
|                | 50    | —          | 6.15  | 6.43  | 6.57  | 6.40  | 6.37  |
|                | 75    | —          | —     | —     | —     | —     | —     |
|                | Botm. | 6.49       | 6.01  | 6.45  | 6.56  | 6.38  | 6.22  |
| S<br><br>‰     | 0     | 32.99      | 32.94 | 32.92 | 32.88 | 32.85 | 32.87 |
|                | 10    | 33.04      | 32.95 | 32.97 | 32.85 | 32.65 | 32.95 |
|                | 20    | —          | —     | —     | —     | —     | —     |
|                | 25    | 33.04      | 32.99 | 32.88 | 32.88 | 32.88 | 32.97 |
|                | 30    | —          | —     | —     | —     | —     | —     |
|                | 50    | —          | 32.99 | 32.88 | 32.92 | 32.88 | 32.88 |
|                | 75    | —          | —     | —     | —     | —     | —     |
|                | Botm. | 33.04      | 32.97 | 32.99 | 32.94 | 32.86 | 32.92 |
| Depth (m)      |       | —          | 72    | 78    | 76    | 82    | 82    |
| Secchi (m)     |       | —          | —     | 2.5   | 3     | —     | 5     |
| Color          |       | —          | —     | —     | —     | —     | —     |
| Sea            |       | 2          | 2     | 2     | 2     | 2     | —     |
| Swell          |       | 2          | 2     | 2     | 2     | 2     | —     |
| Air Temp. (°C) |       | 8.0        | 9.0   | 8.4   | 8.0   | 8.1   | 8.8   |
| Baro. (mm)     |       | —          | —     | —     | —     | —     | —     |
| Wind           |       | E. 2       | NE. 2 | NE. 2 | E. 2  | E. 3  | E. 2  |
| Cloud          |       | Nb. 8      | Cu. 2 | Cu. 2 | Cu. 2 | Ci. 3 | Ci. 3 |
| Weather        |       | C          | B     | B     | B     | BC    | BC    |

| ② April |        |       |        |       |                | ③ JUNE |       |       |       |       |                |
|---------|--------|-------|--------|-------|----------------|--------|-------|-------|-------|-------|----------------|
| 04      | 05     | 06    | 07     | 08    | W <sub>2</sub> | 04     | 05    | 06    | 07    | 08    | W <sub>2</sub> |
| 9       | 9      | 11    | 12     | 12    | 12             | 5      | 5     | 5     | 5     | 5     | 5              |
| 1640    | 1810   | 0810  | 0730   | 0930  | 1250           | 0320   | 0510  | 0700  | 0930  | 1120  | 1430           |
| 9.20    | 6.80   | 6.50  | 6.50   | 6.90  | 7.20           | 11.9   | 10.70 | 13.0  | 15.0  | 14.9  | 14.5           |
| 7.54    | 6.48   | 6.32  | 6.42   | 9.49  | 6.73           | 10.16  | 9.96  | 10.24 | 13.12 | 13.34 | 13.02          |
| —       | —      | —     | —      | —     | —              | 9.97   | 9.98  | 10.04 | 9.94  | 10.84 | 11.25          |
| 6.42    | 6.30   | 6.45  | 6.27   | 6.50  | 6.67           | —      | —     | —     | —     | —     | —              |
| —       | —      | —     | —      | —     | —              | —      | 9.91  | 10.13 | 9.50  | 9.43  | 9.96           |
| —       | 6.31   | 6.32  | 6.06   | 6.01  | 5.90           | —      | —     | 6.64  | 9.21  | 8.38  | 10.19          |
| —       | —      | —     | —      | —     | —              | —      | —     | —     | —     | 8.03  | —              |
| —       | —      | —     | —      | —     | —              | —      | —     | —     | —     | —     | —              |
| 6.26    | 6.31   | 5.79  | 5.88   | 5.70  | 5.82           | 9.95   | 9.63  | 8.76  | 7.54  | 7.70  | 8.90           |
| 32.76   | 32.65  | 32.72 | 32.79  | 32.64 | 32.61          | 32.85  | 32.81 | 33.05 | 32.56 | 32.57 | 32.61          |
| 32.76   | 32.72  | 32.72 | 32.83  | 32.68 | 32.63          | 32.88  | 32.79 | 32.01 | 32.70 | 32.65 | 32.66          |
| —       | —      | —     | —      | —     | —              | 32.74  | 33.05 | 33.05 | 32.96 | 32.85 | 32.65          |
| 32.76   | 32.74  | 32.72 | 32.86  | 32.68 | 32.65          | —      | —     | —     | —     | —     | —              |
| —       | —      | —     | —      | —     | —              | —      | 32.93 | 33.02 | 32.85 | 32.81 | 32.65          |
| —       | 32.74  | 32.81 | 32.88  | 32.72 | 32.68          | —      | 32.70 | 33.13 | 32.81 | 32.86 | 32.65          |
| 32.76   | 32.74  | 32.88 | 32.88  | 32.74 | 32.72          | 32.48  | 32.76 | 33.02 | 32.89 | 32.74 | 32.65          |
| 32      | 65     | 83    | 80     | 83    | 83             | 34     | 69    | 75    | 79    | 93    | 72             |
| 2.3     | 2      | 1.8   | 4      | 6     | 9              | —      | —     | 6     | 10    | 10    | 6              |
| —       | —      | —     | —      | —     | —              | —      | —     | —     | —     | —     | —              |
| 3       | 2      | 4     | 4      | 3     | 3              | 3      | 3     | 6     | 6     | 6     | 5              |
| 1       | 1      | 3     | 3      | 3     | 3              | 2      | 2     | 3     | 3     | 3     | 3              |
| 9.5     | 8.5    | 6.8   | 7.3    | 8.9   | 9.5            | 9.8    | 10.0  | 14.5  | 16.5  | 17.0  | 17.5           |
| —       | —      | —     | —      | —     | —              | —      | —     | —     | —     | —     | —              |
| NW. 2   | NW. 3  | S. 4  | NE. 3  | NE. 3 | SE. 2          | NW. 3  | NW. 4 | SW. 6 | NW. 6 | SW. 6 | SW. 5          |
| Cu. 9   | St. 10 | Ci. 1 | Cu. 10 | Cu. 9 | Cu. 9          | 10     | Ci. 1 | Ci. 3 | Ci. 4 | Ci. 2 | Ci. 3          |
| C       | C      | B     | C      | C     | C              | C      | BC    | BC    | BC    | BC    | BC             |



| Date           |                | ④ August |         |       |       |       |       |
|----------------|----------------|----------|---------|-------|-------|-------|-------|
| Sta. No.       |                | 04       | 05      | 06    | 07    | 08    | 09    |
| Day            |                | 17       | 17      | 19    | 19    | 19    | 19    |
| Item           | Time<br>Z(m) \ | 1215     | 1333    | 1023  | 1235  | 1402  | 1530  |
| T<br>°C        | 0              | 23.21    | 21.70   | 25.23 | 26.92 | 27.40 | 27.26 |
|                | 10             | 19.70    | 17.17   | 19.51 | 26.72 | 26.83 | 26.72 |
|                | 20             | 19.38    | 16.98   | 18.62 | 19.73 | 20.95 | 19.29 |
|                | 30             | —        | 16.87   | 16.13 | 14.96 | 15.97 | 15.11 |
|                | 50             | —        | 16.65   | 14.44 | 10.77 | 9.79  | 9.83  |
|                | 75             | —        | —       | —     | 9.82  | —     | —     |
|                | 100            | —        | —       | —     | —     | —     | —     |
|                | Botm.          | 18.03    | 16.48   | 11.94 | 9.72  | 9.75  | 9.48  |
| S<br>‰         | 0              | 32.45    | 32.89   | 32.70 | 31.99 | 31.94 | 31.88 |
|                | 10             | 32.64    | 32.91   | 32.21 | 31.96 | 31.95 | 31.86 |
|                | 20             | 32.66    | 32.93   | 32.78 | 32.93 | 32.74 | 33.01 |
|                | 30             | —        | 32.94   | 33.04 | 33.57 | 33.52 | 33.56 |
|                | 50             | —        | * 32.97 | 33.30 | 33.41 | 33.36 | 33.38 |
|                | 75             | —        | —       | —     | 33.31 | —     | —     |
|                | 100            | —        | —       | —     | —     | —     | —     |
|                | Botm.          | 32.75    | 32.97   | 33.21 | 33.30 | 33.35 | 33.35 |
| Depth (m)      |                | 38       | 76      | 88    | 90    | 72    | 83    |
| Secchi (m)     |                | 5        | 5       | 15    | 17    | 19    | 18    |
| Color          |                | 6        | 6       | 3     | 3     | 3     | 3     |
| Sea            |                | 2        | 2       | 2     | 2.5   | 2.5   | 2     |
| Swell          |                | —        | —       | —     | —     | —     | —     |
| Air Temp. (°C) |                | 26.2     | 22.7    | 26.7  | 27.6  | 28.5  | 28.0  |
| Baro. (mm)     |                | 1015     | 1015    | 1015  | 1015  | 1014  | 1014  |
| Wind           |                | S. 2     | S. 2    | SE. 2 | SE. 3 | SE. 2 | SE. 3 |
| Cloud          |                | Cl. 3    | Cu. 4   | Ac. 6 | Ac. 6 | Ac. 7 | Sc. 9 |
| Weather        |                | BC       | BC      | BC    | BC    | BC    | C     |

| ⑤ October |       |       |       |                  |                  |                  | ⑥ December |       |       |       |
|-----------|-------|-------|-------|------------------|------------------|------------------|------------|-------|-------|-------|
| 04        | 05    | 06    | 07    | W <sub>5</sub> ' | W <sub>6</sub> ' | W <sub>7</sub> ' | 05         | 06    | 07    | 08    |
| 17        | 17    | 17    | 17    | 18               | 18               | 18               | 22         | 22    | 22    | 22    |
| 1130      | 0950  | 0810  | 0550  | 1030             | 1400             | 1730             | 0640       | 0520  | 0200  | 0030  |
| 17.90     | 15.50 | 18.50 | 17.90 | 18.50            | 18.80            | 17.50            | 12.50      | 11.0  | 12.00 | 11.80 |
| 17.48     | 16.79 | 18.07 | 18.06 | 18.31            | 18.36            | 18.07            | 11.02      | 11.97 | 11.91 | 11.55 |
| 17.40     | 16.97 | 17.35 | 17.19 | 18.35            | —                | —                | 10.46      | 11.94 | 11.95 | 11.57 |
| —         | 16.94 | 16.54 | 16.83 | —                | —                | —                | —          | 11.94 | 11.98 | 11.75 |
| —         | 16.90 | 15.24 | 15.78 | —                | —                | —                | —          | 11.97 | 12.13 | 11.65 |
| —         | —     | —     | 15.59 | —                | —                | —                | —          | —     | 11.93 | 11.90 |
| —         | —     | —     | —     | —                | —                | —                | —          | —     | —     | —     |
| 17.13     | 16.90 | 14.59 | 15.39 | 18.32            | 18.29            | 18.21            | 10.87      | 11.97 | 11.90 | 11.86 |
| 33.03     | 33.25 | 32.53 | 32.53 | 32.45            | 32.42            | 32.37            | 33.29      | 33.36 | 33.29 | 33.25 |
| 33.06     | 33.12 | 32.53 | 32.60 | 32.43            | 32.34            | 32.35            | 33.28      | 33.33 | 33.30 | 33.29 |
| 33.07     | 33.13 | 32.93 | 32.96 | 32.42            | —                | —                | 33.28      | 33.33 | 33.33 | 33.23 |
| —         | 33.12 | 33.22 | 33.09 | —                | —                | —                | —          | 33.33 | 32.35 | 33.33 |
| —         | 33.14 | 33.57 | 33.46 | —                | —                | —                | —          | 33.33 | 33.42 | 33.34 |
| —         | —     | —     | 33.47 | —                | —                | —                | —          | —     | 33.43 | 33.67 |
| —         | —     | —     | —     | —                | —                | —                | —          | —     | —     | —     |
| 33.13     | 33.14 | 33.74 | 33.56 | 32.98            | 32.34            | 32.35            | 33.67      | 33.33 | 33.42 | 33.69 |
| 31        | 65    | 70    | 96    | 30               | 20               | 23               | 42         | 62    | 89    | 86    |
| 4         | 7     | 18    | —     | 2                | 3                | 3                | —          | —     | —     | —     |
| —         | —     | —     | —     | —                | —                | —                | —          | —     | —     | —     |
| —         | —     | —     | —     | —                | —                | —                | 2          | 2     | 0     | 0     |
| —         | —     | —     | —     | —                | —                | —                | 1          | 1     | 1     | 1     |
| —         | —     | —     | —     | —                | —                | —                | 9.0        | 11.5  | 13.5  | 10.0  |
| —         | —     | —     | —     | —                | —                | —                | 766        | 766   | 766   | 766   |
| —         | —     | —     | —     | —                | —                | —                | N.3        | N.3   | N.2   | N.1   |
| —         | —     | —     | —     | —                | —                | —                | —          | —     | —     | As. 2 |
| —         | —     | —     | —     | —                | —                | —                | B          | B     | B     | B     |

## 310 선 해양 관측 성적

Oceanographic Data, Line 310

| Date           |              | ① February |       |       |       |       |       |
|----------------|--------------|------------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 03         | 04    | 05    | 06    | 07    | 08    |
| Day            |              | 19         | 19    | 19    | 19    | 19    | 19    |
| Item           | Time<br>Z(m) | 2300       | 2120  | 1935  | 1810  | 1650  | 1500  |
| T<br>°C        | 0            | 5.70       | 5.80  | 6.90  | 6.90  | 6.50  | 6.50  |
|                | 10           | 5.29       | 4.78  | 6.56  | 6.51  | 6.07  | 6.34  |
|                | 20           | —          | —     | —     | —     | —     | —     |
|                | 25           | —          | 4.81  | 6.01  | 6.21  | 6.02  | 6.16  |
|                | 30           | —          | —     | —     | —     | —     | —     |
|                | 50           | —          | —     | 5.74  | 6.07  | 5.93  | 6.05  |
|                | 75           | —          | —     | —     | —     | —     | —     |
|                | Botm.        | 5.22       | 4.84  | 5.75  | 6.02  | 5.07  | 6.00  |
| S<br>‰         | 0            | 32.92      | —     | —     | 32.88 | 32.85 | 32.86 |
|                | 10           | 32.90      | —     | —     | 32.86 | 32.86 | 32.85 |
|                | 20           | —          | —     | —     | —     | —     | —     |
|                | 25           | —          | 32.86 | —     | —     | 32.86 | 32.85 |
|                | 30           | —          | —     | —     | —     | —     | —     |
|                | 50           | —          | 32.86 | —     | —     | 32.92 | 32.86 |
|                | 75           | —          | —     | —     | —     | —     | —     |
|                | Botm.        | 32.94      | 32.92 | —     | —     | 32.95 | 32.88 |
| Depth (m)      |              | 19         | 57    | 60    | 73    | 73    | 85    |
| Secchi (m)     |              | —          | —     | —     | 4     | 5     | 55    |
| Color          |              | —          | —     | —     | —     | —     | —     |
| Sea            |              | 1          | 2     | 2     | 2     | 3     | 2     |
| Swell          |              | 1          | 1     | 2     | 2     | 3     | 2     |
| Air Temp. (°C) |              | 6.2        | 6.5   | 8.5   | 9.0   | 9.1   | 9.0   |
| Baro. (mm)     |              | —          | —     | —     | —     | —     | —     |
| Wind           |              | N. 2       | N. 3  | E. 1  | E. 3  | E. 3  | E. 3  |
| Cloud          |              | 10         | 10    | Cl. 5 | Cl. 3 | Cl. 3 | Cl. 3 |
| Wather         |              | C          | C     | B     | BC    | BC    | BC    |

| ② April |       |       |        |       | ② June |       |       |       |       |
|---------|-------|-------|--------|-------|--------|-------|-------|-------|-------|
| 03      | 04    | 05    | 06     | 07    | 03     | 04    | 05    | 06    | 07    |
| 12      | 12    | 12    | 12     | 12    | 6      | 5     | 5     | 5     | 5     |
| 2350    | 2200  | 2010  | 1820   | 1620  | 0050   | 2300  | 2110  | 1920  | 1730  |
| 6.90    | 6.60  | 7.10  | 6.80   | 7.30  | 16.0   | 14.3  | 15.7  | 15.6  | 15.5  |
| 6.53    | 5.93  | 6.19  | 6.48   | 6.55  | 15.59  | 13.64 | 14.97 | 14.86 | 10.74 |
| —       | —     | —     | —      | —     | —      | 12.94 | 13.69 | 14.55 | 9.28  |
| 6.12    | 5.69  | 6.83  | 5.93   | 6.21  | —      | —     | —     | —     | —     |
| —       | —     | —     | —      | —     | —      | —     | —     | 14.35 | 8.81  |
| —       | 5.92  | 5.75  | 5.91   | 6.18  | —      | —     | —     | —     | 8.63  |
| —       | —     | —     | —      | —     | —      | —     | —     | —     | —     |
| —       | —     | —     | —      | —     | 14.97  | 12.93 | 13.14 | 13.84 | 8.37  |
| 32.52   | 32.52 | 32.52 | 32.48  | 32.63 | 32.38  | 32.48 | 32.48 | 32.66 | 32.41 |
| 32.52   | 32.52 | 32.52 | 32.54  | 32.65 | 32.66  | 32.39 | 32.48 | 32.76 | 32.59 |
| —       | —     | —     | —      | —     | —      | 32.32 | 32.50 | 32.65 | 32.57 |
| 32.52   | 32.52 | 32.52 | 32.56  | 32.68 | —      | —     | —     | —     | —     |
| —       | —     | —     | —      | —     | —      | —     | —     | 32.59 | 32.56 |
| —       | 32.54 | 32.54 | 32.56  | 32.72 | —      | —     | —     | —     | 32.47 |
| —       | —     | —     | —      | —     | —      | —     | —     | —     | —     |
| 32.54   | 32.54 | 32.56 | 32.57  | 32.74 | 32.50  | 32.39 | 32.56 | 32.74 | 34.39 |
| 35      | 60    | 73    | 73     | 73    | 19     | 38    | 39    | 54    | 71    |
| —       | —     | —     | 6      | 8     | —      | —     | —     | 2     | 6     |
| —       | —     | —     | —      | —     | —      | —     | —     | —     | —     |
| 3       | 3     | 3     | 3      | 2     | 7      | 3     | 3     | 3     | 7     |
| 3       | 3     | 3     | 3      | 3     | 3      | 3     | 3     | 3     | 3     |
| 5.8     | 6.3   | 7.5   | 8.5    | 11.5  | 14.4   | 14.8  | 16.1  | 16.4  | 17.5  |
| —       | —     | —     | —      | —     | —      | —     | —     | —     | —     |
| SE. 2   | SE. 2 | SE. 2 | SE. 2  | SE. 2 | SW. 7  | SW. 4 | SW. 4 | SW. 4 | SW. 5 |
| 8       | 8     | 9     | Cu. 10 | Cu. 9 | Cl. 8  | Cl. 3 | Cl. 3 | Cl. 3 | Cl. 3 |
| C       | C     | C     | C      | C     | C      | BC    | BC    | BC    | BC    |

| Date           |       | ④ August |       |       |        |        |        |        | ⑤ December |       |
|----------------|-------|----------|-------|-------|--------|--------|--------|--------|------------|-------|
| Sta. No.       |       | 03       | 04    | 05    | 06     | 07     | 08     | 09     | 05         | 07    |
| Day            |       | 20       | 20    | 20    | 20     | 19     | 19     | 19     | 21         | 21    |
| Item           | Time  | 0435     | 0300  | 0130  | 0005   | 2230   | 2100   | 1925   | 1620       | 1840  |
|                | Z(m)  |          |       |       |        |        |        |        |            |       |
| T<br>C         | 0     | 26.70    | 26.53 | 26.77 | 23.94  | 26.99  | 26.83  | 26.72  | 11.80      | 11.50 |
|                | 10    | 26.41    | 26.46 | 24.29 | 27.02  | 26.96  | 26.50  | 26.45  | 11.61      | 11.53 |
|                | 20    | 23.91    | 19.97 | 21.95 | 19.57  | 22.96  | 22.71  | 19.72  | 11.59      | 11.44 |
|                | 25    | —        | —     | —     | —      | —      | —      | —      | —          | —     |
|                | 30    | 17.96    | 15.63 | 17.71 | 15.11  | 16.04  | 15.20  | 19.04  | 11.61      | 11.42 |
|                | 50    | —        | 13.25 | 9.94  | 9.63   | 9.82   | 8.54   | 7.78   | 11.60      | 11.36 |
|                | 75    | —        | —     | —     | —      | —      | —      | 7.68   | —          | —     |
|                | Botm. | 13.76    | 12.03 | 8.68  | 9.03   | 8.16   | 8.41   | 7.69   | 11.61      | 11.34 |
| S<br>‰         | 0     | 31.98    | —     | 31.84 | 31.77  | 31.19  | 31.86  | 31.03  | 33.69      | 33.42 |
|                | 10    | 31.96    | 31.97 | 32.20 | 32.24  | 32.21  | 31.25  | 31.03  | 33.62      | 33.43 |
|                | 20    | 32.26    | 32.44 | 34.41 | 32.84  | 32.32  | 32.34  | 32.32  | 33.61      | 33.51 |
|                | 25    | —        | —     | —     | —      | —      | —      | —      | —          | —     |
|                | 30    | 32.66    | 32.83 | 32.86 | 33.04  | 33.26  | 33.30  | 32.89  | 33.60      | 33.51 |
|                | 50    | —        | 32.91 | 32.88 | 32.91  | 33.06  | 33.10  | 32.85  | 33.62      | 33.51 |
|                | 75    | —        | —     | —     | —      | —      | —      | 32.96  | —          | —     |
|                | Botm. | 32.89    | 32.88 | 32.78 | 32.86  | 32.94  | 33.16  | 32.95  | 33.63      | 33.52 |
| Depth (m)      |       | 58       | 68    | 76    | 80     | 85     | 87     | 88     | 71         | 71    |
| Secchi (m)     |       | —        | —     | —     | —      | —      | —      | —      | 2.5        | —     |
| Color          |       | —        | —     | —     | —      | —      | —      | —      | 4          | —     |
| Sea            |       | 1.5      | 1.5   | 1     | 1      | 2      | 2.5    | 3      | 0          | 0     |
| Swell          |       | —        | —     | —     | —      | —      | —      | —      | 1          | 1     |
| Air Temp. (°C) |       | 27.0     | 27.0  | 27.0  | 22.9   | 27.0   | 23.6   | 26.0   | 15.4       | 10.5  |
| Baro. (mm)     |       | 1015     | 1015  | 1015  | 1015   | 1015   | 1015   | 1015   | 766        | 766   |
| Wind           |       | SW. 2    | SW. 2 | SW. 1 | W. 1   | N. 1   | N. 3   | N. 2   | N. 1       | N. 1  |
| Cloud          |       | Sc. 8    | Sc. 8 | Sc. 3 | Sc. 10 | Sc. 10 | Ns. 10 | Ns. 10 | As. 5      | As. 6 |
| Weather        |       | C        | C     | BC    | C      | C      | C      | C      | BC         | BC    |

# 309선 해양관측성적

Oceanographic Data, Line 309

| Date           |       | ① February |       |       |       |       |
|----------------|-------|------------|-------|-------|-------|-------|
| Sta. No.       |       | 01         | 02    | 03    | 04    | 05    |
| Day            |       | 22         | 22    | 22    | 22    | 23    |
| Item           | Time  | 0815       | 1005  | 1145  | 1335  | 1100  |
|                | Z(m)  |            |       |       |       |       |
| T<br>°C        | 0     | 4.50       | 4.90  | 4.40  | 4.30  | 5.40  |
|                | 10    | 4.39       | 4.29  | 4.78  | 5.37  | 5.31  |
|                | 25    | 4.29       | 4.78  | 4.77  | 5.32  | 5.15  |
|                | 50    | —          | —     | —     | —     | 5.12  |
|                | Botm. | 4.48       | 3.78  | 4.79  | 5.07  | 5.09  |
| S<br>‰         | 0     | 32.45      | 32.48 | 32.34 | 32.43 | 32.47 |
|                | 10    | 32.43      | 32.41 | 32.39 | 32.47 | 32.45 |
|                | 25    | 32.43      | 32.41 | 32.39 | 32.41 | 32.48 |
|                | 50    | —          | —     | —     | —     | 32.52 |
|                | Botm. | 32.41      | 32.86 | 32.41 | 32.41 | 32.45 |
| Depth (m)      |       | 31         | —     | 46    | 59    | 68    |
| Secchi (m)     |       | 1.5        | —     | 4     | 4.5   | 5.5   |
| Color          |       | —          | —     | —     | —     | —     |
| Sea            |       | 4          | 5     | 5     | 6     | 4     |
| Swell          |       | 3          | 3     | 3     | 3     | 3     |
| Air Temp. (°C) |       | 4.5        | 4.4   | 3.8   | 3.1   | 3.6   |
| Baro. (mm)     |       | —          | —     | —     | —     | —     |
| Wind           |       | NW. 4      | NW. 4 | NW. 5 | NW. 4 | NW. 4 |
| Cloud          |       | Cl. 3      | Cl. 3 | Cl. 3 | Cl. 3 | Nb. 8 |
| Weather        |       | BC         | BC    | BC    | BC    | C     |

| Date           |       | ② April |        |       |       |       |       |                |
|----------------|-------|---------|--------|-------|-------|-------|-------|----------------|
| Sta. No.       |       | 01      | 02     | 03    | 04    | 05    | 06    | W <sub>1</sub> |
| Day            |       | 13      | 13     | 13    | 13    | 13    | 13    | 13             |
| Item           | Time  | 0540    | 0730   | 0920  | 1110  | 1300  | 1450  | 1720           |
|                | Z(m)  |         |        |       |       |       |       |                |
| T<br>°C        | 0     | 6.30    | 6.40   | 6.10  | 6.20  | 7.40  | 7.90  | 7.10           |
|                | 10    | 5.83    | 5.81   | 5.55  | 5.54  | 6.19  | 6.37  | 5.76           |
|                | 20    | —       | —      | —     | —     | —     | —     | —              |
|                | 25    | —       | 5.79   | 5.52  | 5.53  | 5.78  | 6.13  | 5.46           |
|                | 30    | —       | —      | —     | —     | —     | —     | —              |
|                | 50    | —       | —      | —     | —     | —     | 6.11  | 5.38           |
|                | Botm. | 5.86    | 5.75   | 5.26  | 5.46  | 5.74  | 6.08  | 5.22           |
| S<br>‰         | 0     | 32.38   | 32.43  | 32.38 | 32.30 | 32.30 | 32.30 | 32.20          |
|                | 10    | 32.36   | 32.43  | 32.38 | 32.32 | 32.30 | 32.30 | 32.20          |
|                | 20    | —       | —      | —     | —     | —     | —     | —              |
|                | 25    | —       | 32.39  | 32.38 | 32.36 | 32.30 | 32.30 | 32.20          |
|                | 30    | —       | —      | —     | —     | —     | —     | —              |
|                | 50    | —       | —      | —     | —     | —     | 32.29 | 32.21          |
|                | Botm. | 32.34   | 32.38  | 32.39 | 32.38 | 32.30 | 32.29 | 32.23          |
| Depth (m)      |       | 28      | 33     | 42    | 52    | 56    | 73    | 76             |
| Secchi (m)     |       | —       | 3      | 5     | 6     | 9     | 11    | 10             |
| Color          |       | —       | —      | —     | —     | —     | —     | —              |
| Sea            |       | 2       | 2      | 2     | 2     | 2     | 2     | 2              |
| Swell          |       | 2       | 2      | 2     | 2     | 2     | 2     | 2              |
| Air Temp. (°C) |       | 8.7     | 9.0    | 8.8   | 10.1  | 11.5  | 12.2  | 8.5            |
| Baro. (mm)     |       | —       | —      | —     | —     | —     | —     | —              |
| Wind           |       | NE. 2   | NE. 2  | NE. 2 | NE. 2 | NE. 2 | NE. 2 | NE. 2          |
| Cloud          |       | Cu. 10  | Cu. 10 | St. 8 | Nb. 8 | Nb. 7 | Ci. 3 | Ci. 2          |
| Weather        |       | C       | C      | C     | C     | BC    | BC    | B              |



| ③ June |       |       |       |       |       |       |                |
|--------|-------|-------|-------|-------|-------|-------|----------------|
| 01     | 02    | 03    | 04    | 05    | 06    | 07    | W <sub>1</sub> |
| 8      | 8     | 8     | 8     | 8     | 8     | 8     | 8              |
| 0530   | 0720  | 0910  | 1100  | 1250  | 1440  | 1630  | 1900           |
| 15.5   | 15.5  | 15.2  | 15.4  | 16.1  | 16.2  | 17.7  | 16.0           |
| 15.26  | 15.18 | 14.15 | 14.24 | 12.05 | 15.87 | 17.31 | 17.30          |
| 15.15  | 13.72 | 12.08 | 12.00 | 11.61 | 10.91 | 9.50  | 8.28           |
| —      | —     | —     | —     | —     | —     | —     | —              |
| —      | —     | —     | 10.98 | 10.81 | 10.23 | 8.37  | 8.02           |
| —      | —     | —     | —     | —     | 9.82  | 8.05  | —              |
| 15.09  | 13.39 | 11.63 | 10.89 | 10.81 | 9.34  | 8.02  | 7.84           |
| 32.83  | 32.91 | 32.64 | 32.45 | 32.56 | 33.09 | 32.41 | 32.62          |
| 32.66  | 32.86 | 32.84 | 32.78 | 32.59 | 32.46 | 32.63 | 32.72          |
| 32.70  | 32.87 | —     | 33.29 | 32.65 | 32.78 | 32.70 | 32.74          |
| —      | —     | —     | —     | —     | —     | —     | —              |
| —      | —     | —     | 32.76 | 32.66 | 32.43 | 32.91 | 32.95          |
| —      | —     | —     | —     | —     | 32.77 | 32.93 | —              |
| 33.73  | 32.90 | 32.82 | 33.06 | 32.86 | 32.99 | 32.58 | 32.75          |
| 30     | 31    | 34    | 55    | 54    | 65    | 70    | 57             |
| —      | 7     | 7     | 7     | 8     | 10    | 9     | 10             |
| —      | —     | —     | —     | —     | —     | —     | —              |
| 2      | 1     | 2     | 1     | 2     | 2     | 2     | 3              |
| 1      | 1     | 1     | 1     | 1     | 1     | 2     | 3              |
| 17.5   | 20.3  | 19.5  | 20.0  | 20.5  | 22.0  | 19.8  | 19.5           |
| —      | —     | —     | —     | —     | —     | —     | —              |
| SW. 2  | SN. 1 | SW. 2 | SW. 1 | SW. 2 | SW. 2 | SW. 3 | SW. 4          |
| Cl. 1  | 0     | 0     | 0     | 0     | 0     | 0     | 0              |
| E      | B     | B     | E     | B     | E     | E     | B              |

[illegible]



| Date           |              | ⑤ October |                          |                          |                          | ⑥ December |       |       |        |
|----------------|--------------|-----------|--------------------------|--------------------------|--------------------------|------------|-------|-------|--------|
| Sta. No.       |              | 07        | 36°10'<br>125°10'<br>y1' | 36°23'<br>125°10'<br>y2' | 36°40'<br>125°10'<br>y3' | 02         | 03    | 04    | 06     |
| Day            |              | 19        | 19                       | 19                       | 20                       | 13         | 13    | 13    | 13     |
| Item           | Time<br>Z(m) | 1603      | 1930                     | 2240                     | 0150                     | 1710       | 1826  | 1940  | 2250   |
| T<br>C         | 0            | 18.30     | 17.90                    | 17.10                    | 16.80                    | 10.60      | 11.50 | 12.30 | 12.50  |
|                | 10           | 17.27     | 17.23                    | 17.25                    | 16.82                    | 11.30      | 12.15 | 12.55 | 12.44  |
|                | 20           | 17.04     | 17.10                    | 16.85                    | 16.72                    | 11.15      | 12.15 | 12.56 | 12.43  |
|                | 30           | 16.08     | 15.07                    | 15.25                    | 16.30                    | —          | 12.16 | 12.58 | 12.44  |
|                | 50           | 16.09     | 16.16                    | 14.68                    | 15.63                    | —          | —     | —     | 12.48  |
|                | Botm.        | 16.74     | 14.73                    | 14.58                    | 14.20                    | 11.23      | 12.14 | 12.55 | 12.46  |
| S<br>‰         | 0            | 32.93     | 32.98                    | 32.90                    | 32.90                    | 33.55      | 33.65 | 33.73 | 33.72  |
|                | 10           | 33.03     | 32.99                    | 32.95                    | 32.91                    | 33.53      | 33.62 | 33.72 | 33.71  |
|                | 20           | 33.15     | 33.02                    | 32.96                    | 32.91                    | 33.53      | 33.68 | 33.72 | 33.71  |
|                | 30           | 33.22     | 33.24                    | 33.11                    | 32.93                    | —          | 33.61 | 32.71 | 33.72  |
|                | 50           | 33.22     | 33.24                    | 33.19                    | 32.98                    | —          | —     | —     | 33.72  |
|                | Botm.        | 33.26     | 33.27                    | 33.21                    | 33.06                    | 33.53      | 33.59 | 33.71 | 33.00  |
| Depth (m)      |              | 73        | 70                       | 70                       | 62                       | 38         | 56    | 55    | 68     |
| Secchi (m)     |              | 15        | —                        | —                        | —                        | 2          | —     | —     | —      |
| Color          |              | —         | —                        | —                        | —                        | 5          | —     | —     | —      |
| Sea            |              | —         | —                        | —                        | —                        | 1          | 1     | 1     | 2      |
| Swell          |              | —         | —                        | —                        | —                        | 1          | 1     | 1     | 1      |
| Air Temp. (°C) |              | —         | —                        | —                        | —                        | 4.0        | 4.9   | 5.5   | 7.5    |
| Baro. (mm)     |              | —         | —                        | —                        | —                        | 766        | 765   | 765   | 765    |
| Wind           |              | —         | —                        | —                        | —                        | SE. 2      | SE. 4 | SE. 4 | S. 7   |
| Cloud          |              | —         | —                        | —                        | —                        | As. 10     | St. 4 | St. 2 | St. 10 |
| Weather        |              | —         | —                        | —                        | —                        | C          | BC    | B     | C      |

| ④ June |       |        |       |       |       |       |
|--------|-------|--------|-------|-------|-------|-------|
| 01     | 02    | 03     | 04    | 05    | 06    | 07    |
| 9      | 9     | 9      | 9     | 9     | 8     | 8     |
| 0830   | 0640  | 0450   | 0300  | 0110  | 2320  | 2130  |
| 16.1   | 15.2  | 14.2   | 16.9  | 16.5  | 17.0  | 17.0  |
| 12.53  | 12.81 | 10.72  | 13.44 | 12.83 | 12.75 | 16.21 |
| —      | —     | 10.30  | 11.11 | 10.32 | 9.83  | 9.25  |
| —      | —     | —      | —     | —     | —     | —     |
| —      | —     | 10.37  | 10.55 | 9.88  | 9.52  | 9.49  |
| —      | —     | —      | —     | —     | 8.79  | 8.61  |
| 10.92  | 11.28 | 10.10  | 10.23 | 8.97  | 8.52  | 8.46  |
| 31.51  | 32.63 | 32.59  | —     | 33.11 | 32.55 | 32.55 |
| 32.43  | 32.68 | —      | 32.57 | 32.92 | 32.56 | 32.56 |
| —      | —     | 32.66  | 32.60 | 32.29 | 32.47 | 32.46 |
| —      | —     | —      | —     | —     | —     | —     |
| —      | —     | 32.38  | 32.79 | 32.97 | 32.74 | 32.72 |
| —      | —     | —      | —     | —     | 32.46 | 32.46 |
| 32.48  | 32.63 | 32.76  | —     | 33.15 | 32.73 | 32.71 |
| 20     | 26    | 44     | 46    | 51    | 65    | 62    |
| 5.5    | 7     | —      | —     | —     | —     | —     |
| —      | —     | —      | —     | —     | —     | —     |
| 2      | 2     | 2      | 2     | —     | 3     | 3     |
| 1      | 2     | 2      | 3     | 3     | 3     | 3     |
| 18.1   | 17.0  | 16.1   | 17.5  | 17.0  | —     | 17.8  |
| —      | —     | —      | —     | —     | —     | —     |
| SW. 2  | SW. 1 | SW. 1  | SW. 2 | SW. 1 | SW. 2 | SW. 2 |
| Cu. 8  | F. 10 | Cu. 10 | Ci. 2 | 0     | 0     | 0     |
| C      | C     | C      | B     | B     | B     | B     |

| Date           |       | ⑤ August |       |       |       |        |        |
|----------------|-------|----------|-------|-------|-------|--------|--------|
| Sta. No.       |       | 01       | 02    | 03    | 04    | 05     | 06     |
| Day            |       | 26       | 26    | 26    | 26    | 26     | 26     |
| Item           | Time  | 2125     | 1935  | 1825  | 1703  | 1535   | 1359   |
|                | Z(m)  |          |       |       |       |        |        |
| T<br>°C        | 0     | 25.31    | 25.84 | 26.20 | 26.80 | 27.20  | 26.30  |
|                | 10    | 24.34    | 25.15 | 25.09 | 25.46 | 25.10  | 25.03  |
|                | 20    | —        | 24.50 | 24.41 | 24.97 | 24.00  | 24.48  |
|                | 30    | —        | —     | 16.00 | 15.08 | 10.30  | 9.23   |
|                | 50    | —        | —     | —     | —     | —      | 9.18   |
|                | Botm. | 22.92    | 19.91 | 15.24 | 12.51 | 10.02  | 9.19   |
| S<br>‰         | 0     | 30.93    | 30.97 | 31.77 | 31.62 | 31.58  | 31.59  |
|                | 10    | 31.24    | 31.04 | 32.01 | 31.55 | 31.55  | 31.52  |
|                | 20    | —        | 31.85 | 31.96 | 31.49 | 31.64  | 31.79  |
|                | 30    | —        | —     | 32.48 | 31.50 | 32.58  | 32.60  |
|                | 50    | —        | —     | —     | —     | —      | 32.56  |
|                | Botm. | 31.46    | 32.17 | 32.53 | 32.59 | 32.61  | 32.56  |
| Depth (m)      |       | 23       | 36    | 49    | 52    | 52     | 60     |
| Secchi (m)     |       | —        | —     | 20    | 18    | 19     | 25     |
| Color          |       | —        | —     | 3     | 3     | 3      | 3      |
| Sea            |       | 0.5      | 0.5   | 0.5   | —     | 0.5    | 0.5    |
| Swell          |       | —        | —     | —     | —     | —      | —      |
| Air Temp. (°C) |       | 24.5     | 24.7  | 25.9  | 27.1  | 28.8   | 29.5   |
| Baro. (mm)     |       | 1015     | 1014  | 1014  | 1014  | 1015   | 1015   |
| Wind           |       | NNW. 4   | N. 2  | NE. 1 | N. 2  | NNE. 1 | NNE. 1 |
| Cloud          |       | 0        | 0     | 0     | 0     | 0      | 0      |
| Weather        |       | B        | B     | B     | B     | B      | B      |

(4) June

| 01    | 02    | 03     | 04    | 05    | 06    | 07    |
|-------|-------|--------|-------|-------|-------|-------|
| 9     | 9     | 9      | 9     | 9     | 8     | 8     |
| 0830  | 0640  | 0450   | 0300  | 0110  | 2320  | 2130  |
| 16.1  | 15.2  | 14.2   | 16.9  | 16.5  | 17.0  | 17.0  |
| 13.53 | 12.81 | 10.72  | 13.44 | 12.83 | 12.75 | 16.21 |
| —     | —     | 10.30  | 11.11 | 10.32 | 9.83  | 9.25  |
| —     | —     | —      | —     | —     | —     | —     |
| —     | —     | 10.37  | 10.55 | 9.88  | 9.52  | 9.49  |
| —     | —     | —      | —     | —     | 8.79  | 8.61  |
| 10.92 | 11.28 | 10.10  | 10.23 | 8.97  | 8.52  | 8.46  |
| 31.51 | 32.63 | 32.59  | —     | 33.11 | 32.55 | 32.55 |
| 32.43 | 32.68 | —      | 32.57 | 32.92 | 32.56 | 32.56 |
| —     | —     | 32.66  | 32.60 | 32.29 | 32.47 | 32.46 |
| —     | —     | —      | —     | —     | —     | —     |
| —     | —     | 32.38  | 32.79 | 32.97 | 32.74 | 32.72 |
| —     | —     | —      | —     | —     | 32.46 | 32.46 |
| 32.48 | 32.63 | 32.76  | —     | 33.15 | 32.73 | 32.71 |
| 20    | 26    | 44     | 46    | 51    | 65    | 62    |
| 5.5   | 7     | —      | —     | —     | —     | —     |
| —     | —     | —      | —     | —     | —     | —     |
| 2     | 2     | 2      | 2     | —     | 3     | 3     |
| 1     | 2     | 2      | 3     | 3     | 3     | 3     |
| 18.1  | 17.0  | 16.1   | 17.5  | 17.0  | —     | 17.8  |
| —     | —     | —      | —     | —     | —     | —     |
| SW. 2 | SW. 1 | SW. 1  | SW. 2 | SW. 1 | SW. 2 | SW. 2 |
| Cu. 8 | F. 10 | Cu. 10 | Cl. 2 | 0     | 0     | 0     |
| C     | C     | C      | B     | B     | B     | B     |



| Date           |       | 5 August |       |       |       |        |        |
|----------------|-------|----------|-------|-------|-------|--------|--------|
| Sta. No.       |       | 01       | 02    | 03    | 04    | 05     | 06     |
| Day            |       | 26       | 26    | 26    | 26    | 26     | 26     |
| Item           | Time  | 2125     | 1935  | 1825  | 1703  | 1535   | 1359   |
|                | Z(m)  |          |       |       |       |        |        |
| T<br>°C        | 0     | 25.31    | 25.84 | 26.20 | 26.80 | 27.20  | 26.30  |
|                | 10    | 24.34    | 25.15 | 25.09 | 25.46 | 25.10  | 25.03  |
|                | 20    | —        | 24.50 | 24.41 | 24.97 | 24.00  | 24.48  |
|                | 30    | —        | —     | 16.00 | 15.08 | 10.30  | 9.23   |
|                | 50    | —        | —     | —     | —     | —      | 9.18   |
|                | Botm. | 22.92    | 19.91 | 15.24 | 12.51 | 10.02  | 9.19   |
| S<br>‰         | 0     | 30.93    | 36.97 | 31.77 | 31.62 | 31.58  | 31.59  |
|                | 10    | 31.24    | 31.04 | 32.01 | 31.55 | 31.55  | 31.52  |
|                | 20    | —        | 31.85 | 31.96 | 31.49 | 31.64  | 31.79  |
|                | 30    | —        | —     | 32.48 | 31.50 | 32.58  | 32.60  |
|                | 50    | —        | —     | —     | —     | —      | 32.56  |
|                | Botm. | 31.46    | 32.17 | 32.53 | 32.59 | 32.61  | 32.56  |
| Depth (m)      |       | 23       | 36    | 49    | 52    | 52     | 60     |
| Secchi (m)     |       | —        | —     | 20    | 18    | 19     | 25     |
| Color          |       | —        | —     | 3     | 3     | 3      | 3      |
| Sea            |       | 0.5      | 0.5   | 0.5   | —     | 0.5    | 0.5    |
| Swell          |       | —        | —     | —     | —     | —      | —      |
| Air Temp. (°C) |       | 24.5     | 24.7  | 25.9  | 27.1  | 28.8   | 29.5   |
| Baro. (mm)     |       | 1015     | 1014  | 1014  | 1014  | 1015   | 1015   |
| Wind           |       | NNW. 4   | N. 2  | NE. 1 | N. 2  | NNE. 1 | NNE. 1 |
| Cloud          |       | 0        | 0     | 0     | 0     | 0      | 0      |
| Weather        |       | B        | B     | B     | B     | B      | B      |

|       |       |        | (6) December |       |       |       |
|-------|-------|--------|--------------|-------|-------|-------|
| 07    | 08    | 09     | 04           | 06    | 07    | 08    |
| 26    | 26    | 26     | —            | —     | —     | —     |
| 1230  | 1045  | 0915   | 0035         | 2200  | 1925  | 1800  |
| 26.03 | 25.42 | 25.1   | 11.40        | 10.50 | 10.30 | 10.30 |
| 25.34 | 24.64 | 22.42  | 10.95        | 10.19 | 9.82  | 10.22 |
| 18.19 | 15.53 | 12.25  | 10.85        | 10.20 | 10.32 | 10.05 |
| 8.76  | 9.43  | 8.82   | —            | 10.15 | 10.16 | 9.73  |
| 8.62  | 8.46  | 7.76   | —            | —     | —     | 9.40  |
| 8.52  | 8.42  | 7.46   | 10.87        | 9.26  | 9.08  | 9.12  |
| 31.31 | 31.27 | 30.93  | 32.29        | 32.98 | 32.88 | 32.54 |
| 31.23 | 31.24 | 31.43  | 33.24        | 32.93 | 32.77 | 32.50 |
| 32.36 | 32.77 | 32.66  | 33.25        | 32.97 | 32.82 | 32.65 |
| 32.59 | 32.73 | 32.74  | 33.29        | 33.00 | 32.93 | 33.23 |
| 32.59 | 32.74 | 32.74  | —            | —     | —     | 33.63 |
| 32.58 | 32.68 | 32.82  | 33.36        | 33.30 | 33.40 | 33.67 |
| 66    | 75    | 77     | 46           | 65    | 62    | 74    |
| 25    | 20    | 20     | —            | —     | —     | —     |
| 3     | 3     | 3      | —            | —     | —     | —     |
| 0.5   | 0.5   | 0.5    | 4            | 4     | 4     | 5     |
| —     | —     | —      | 3            | 3     | 3     | 3     |
| 28.6  | 27.5  | 25.0   | 9.5          | 9.9   | 10.5  | 10.0  |
| 1015  | 1016  | 1016   | 765          | 765   | 765   | 765   |
| —     | —     | NNE. 2 | SW. 5        | SW. 5 | SW. 5 | SW. 6 |
| 0     | 0     | 0      | St. 2        | St. 2 | Ac. 8 | 0     |
| B     | B     | B      | B            | B     | C     | B     |

# 307선 해양관측성적

Oceanographic Data, Line 307

| Date           |              | ① May |       |       |        |
|----------------|--------------|-------|-------|-------|--------|
| Sta. No.       |              | 03    | 04    | 05    | 06     |
| Day            |              | 9     | 9     | 9     | 9      |
| Item           | Time<br>Z(m) | 0700  | 1000  | 1650  | 1340   |
| T<br><br>℃     | 0            | 8.30  | 8.80  | 9.90  | 9.60   |
|                | 10           | 8.39  | 8.60  | 8.77  | 9.26   |
|                | 20           | —     | —     | —     | —      |
|                | 25           | 8.42  | —     | 7.38  | 7.06   |
|                | 30           | —     | —     | —     | —      |
|                | 50           | —     | —     | —     | —      |
|                | Botm.        | 8.43  | 8.45  | 7.25  | 7.04   |
| S<br><br>‰     | 0            | 31.85 | 31.91 | 32.05 | 32.20  |
|                | 10           | 31.76 | 32.02 | 32.20 | 32.20  |
|                | 20           | —     | —     | —     | —      |
|                | 25           | 32.02 | —     | 32.20 | 32.38  |
|                | 30           | —     | —     | —     | —      |
|                | 50           | —     | —     | —     | —      |
|                | Botm.        | 32.02 | 32.20 | 32.20 | 32.20  |
| Depth (m)      |              | 38    | 26    | 46    | 49     |
| Secchi (m)     |              | 1     | 2     | 6     | 7      |
| Color          |              | —     | —     | —     | —      |
| Sea            |              | 2     | 2     | 2     | 3      |
| Swell          |              | 1     | 2     | 2     | 2      |
| Air Temp. (°C) |              | 11.8  | 13.1  | 16.4  | 13.8   |
| Baro. (mm)     |              | —     | —     | —     | —      |
| Wind           |              | S 3   | S 2   | S. 2  | NE. 4  |
| Cloud          |              | Cu 10 | Nb 9  | Cu. 9 | St. 10 |
| Weather        |              | C     | C     | C     | C      |

② August

| 03    | 04    | 05    | 06    | 07    | 08    | 09     |
|-------|-------|-------|-------|-------|-------|--------|
| 27    | 27    | 27    | 27    | 27    | 27    | 27     |
| 0138  | 0415  | 0555  | 0810  | 0935  | 1050  | 1245   |
| 23.20 | 24.38 | 25.70 | 25.01 | 25.02 | 25.02 | 24.83  |
| 23.02 | 23.16 | 23.40 | 24.56 | 24.52 | 23.92 | 23.33  |
| 23.02 | 19.37 | 21.46 | 24.34 | 20.67 | 18.35 | 14.00  |
| —     | —     | —     | —     | —     | —     | —      |
| 23.01 | —     | 14.47 | 9.37  | 9.38  | 8.25  | 19.28  |
| —     | —     | —     | —     | —     | 8.17  | 8.46   |
| 22.93 | 18.22 | 13.70 | 9.08  | 9.06  | 8.12  | 8.39   |
| 31.15 | 31.46 | 31.57 | 31.24 | 31.17 | 31.20 | 31.15  |
| 31.20 | 31.60 | 31.62 | 31.16 | 31.09 | 31.14 | 31.11  |
| 31.18 | 31.87 | 31.70 | 31.26 | 31.48 | 31.84 | 32.38  |
| —     | —     | —     | —     | —     | —     | —      |
| 31.18 | —     | 32.27 | 32.31 | 32.33 | 32.50 | 32.66  |
| —     | —     | —     | —     | —     | 32.53 | 32.66  |
| 31.20 | 31.85 | 32.32 | 32.33 | 32.36 | 32.53 | 32.67  |
| 50    | 28    | 52    | 59    | 52    | 64    | 69     |
| —     | —     | 17    | 17    | 18    | 14    | 20     |
| —     | —     | 4     | 4     | 3     | 3     | 4      |
| 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | —     | 0.5    |
| —     | —     | —     | —     | —     | —     | —      |
| 23.1  | 23.7  | 24.2  | 24.8  | 25.5  | 25.7  | 26.2   |
| 1014  | 1013  | 1013  | 1013  | 1013  | 1013  | 1013   |
| NE. 1 | E. 1  | E. 1  | E. 1  | E. 1  | —     | ESE. 2 |
| 0     | 0     | 0     | 0     | 0     | 0     | 0      |
| B     | B     | B     | B     | B     | B     | B      |



## 306선 해양관측성적

Oceanographic Data, Line 306

| Date           |              | ① August |       |       |       |        |        | ② December |
|----------------|--------------|----------|-------|-------|-------|--------|--------|------------|
| Sta. No.       |              | 04       | 05    | 06    | 07    | 08     | 09     | 04         |
| Day            |              | 27       | 27    | 27    | 27    | 27     | 27     | 8          |
| Item           | Time<br>Z(m) | 2245     | 2055  | 1930  | 1800  | 1630   | 1500   | 1650       |
| T<br>°C        | 0            | 23.12    | 23.15 | 24.50 | 26.43 | 25.73  | 25.52  | 9.30       |
|                | 10           | 22.93    | 22.82 | 24.12 | 24.83 | 24.51  | 23.93  | 9.03       |
|                | 20           | 22.11    | —     | 23.58 | 22.89 | 13.50  | 23.29  | —          |
|                | 30           | —        | —     | 14.29 | 15.23 | 8.87   | 8.60   | —          |
|                | 50           | —        | —     | —     | 10.28 | 8.81   | 8.39   | —          |
|                | Botm.        | 21.78    | 20.79 | 13.32 | 10.23 | 8.74   | 8.35   | 9.03       |
| S<br>‰         | 0            | 30.96    | 30.60 | 30.60 | 31.43 | 31.13  | 31.20  | 32.70      |
|                | 10           | 29.29    | 31.30 | 31.35 | 31.35 | 31.25  | 31.36  | 32.61      |
|                | 20           | 30.22    | —     | 31.54 | 31.59 | 32.12  | 31.21  | —          |
|                | 30           | —        | —     | 32.09 | 32.04 | 32.42  | 32.50  | —          |
|                | 50           | —        | —     | —     | 32.33 | 32.44  | 32.56  | —          |
|                | Botm.        | 31.08    | 30.57 | 32.18 | 32.33 | 32.44  | 32.56  | 34.54      |
| Depth (m)      |              | 36       | 20    | 43    | 60    | 68     | 72     | 20         |
| Secchi (m)     |              | —        | —     | —     | 20    | 20     | 15     | 1.5        |
| Color          |              | —        | —     | —     | 3     | 3      | 3      | 8          |
| Sea            |              | —        | —     | —     | —     | 0.5    | —      | 5          |
| Swell          |              | —        | —     | —     | —     | —      | —      | 2          |
| Air Temp. (°C) |              | 23.7     | 24.3  | 25.4  | 25.0  | 25.6   | 26.3   | 6.5        |
| Baro. (mm)     |              | 1011     | 1011  | 1010  | 1010  | 1010   | 1011   | 765        |
| Wind           |              | —        | —     | —     | —     | SSE. 1 | ESE. 1 | W. 5       |
| Cloud          |              | Cl. 1    | Cl. 2 | Cl. 2 | Ac. 3 | Cl. 3  | 0      | 0          |
| Weather        |              | B        | B     | B     | BC    | BC     | B      | B          |





## 제 3 편

# 횡 단 정 선 해 양 관 측 성 적

(용존산소 pH 및 인산염)



## PART 3

# SECTIONAL OCEANOGRAPHIC OBSERVATIONS

(Oxygen pH and  $\text{PO}_4\text{-P}$ )

1965



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동 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS

EASTERN WATERS

(Oxygen pH and  $po_4-p$ )

1 9 6 5



# 107선 해양관측성적

## Oceanographic Data, Line 107

| Date                              |              | ① February | ② April |      |
|-----------------------------------|--------------|------------|---------|------|
| Sta. No.                          |              | 03         | 02      | 05   |
| Day                               |              | 19         | 14      | 14   |
| Item                              | Time<br>Z(m) | 1010       | 1905    | 0010 |
| O <sub>2</sub><br><br>cc<br>/ L   | 0            | 6.23       | 5.98    | 6.06 |
|                                   | 10           | 6.16       | 6.04    | 6.06 |
|                                   | 25           | 6.57       | 5.92    | 6.00 |
|                                   | 50           | 6.61       | 5.88    | 6.02 |
|                                   | 100          | 6.68       | 5.83    | 6.02 |
|                                   | 150          | 6.68       | 5.83    | 6.02 |
|                                   | 200          | 6.45       | 5.81    | 5.83 |
|                                   | Botm.        | 6.14       | 5.79    | 5.88 |
| pH                                | 0            | —          | —       | —    |
|                                   | 10           | —          | —       | —    |
|                                   | 25           | —          | —       | —    |
|                                   | 50           | —          | —       | —    |
|                                   | 100          | —          | —       | —    |
|                                   | 150          | —          | —       | —    |
|                                   | 200          | —          | —       | —    |
|                                   | Botm.        | —          | —       | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —          | —       | —    |
|                                   | 10           | —          | —       | —    |
|                                   | 25           | —          | —       | —    |
|                                   | 50           | —          | —       | —    |
|                                   | 100          | —          | —       | —    |
|                                   | 150          | —          | —       | —    |
|                                   | 200          | —          | —       | —    |
|                                   | Botm.        | —          | —       | —    |



# 106 선 해양 관측 성적

Oceanographic Data, Line 106

| Date                              |              | ① February | ② April |      |
|-----------------------------------|--------------|------------|---------|------|
| Sta. No.                          |              | 04         | 06      | 04   |
| Day                               |              | 19         | 15      | 15   |
| Item                              | Time<br>Z(m) | 1720       | 0740    | 1215 |
| O <sub>2</sub><br><br>cc<br>/ L   | 0            | 6.20       | 6.08    | 6.13 |
|                                   | 10           | 6.18       | 6.08    | 6.08 |
|                                   | 25           | 6.51       | 6.02    | 6.06 |
|                                   | 50           | 6.45       | 6.00    | 6.00 |
|                                   | 100          | 7.00       | 5.83    | 5.83 |
|                                   | 150          | 7.05       | 5.77    | 6.13 |
|                                   | 200          | 6.58       | 5.23    | 6.17 |
|                                   | Botm.        | 6.14       | 5.23    | 6.23 |
| pH                                | 0            | —          | —       | —    |
|                                   | 10           | —          | —       | —    |
|                                   | 25           | —          | —       | —    |
|                                   | 50           | —          | —       | —    |
|                                   | 100          | —          | —       | —    |
|                                   | 150          | —          | —       | —    |
|                                   | 200          | —          | —       | —    |
|                                   | Botm.        | —          | —       | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —          | —       | —    |
|                                   | 10           | —          | —       | —    |
|                                   | 25           | —          | —       | —    |
|                                   | 50           | —          | —       | —    |
|                                   | 100          | —          | —       | —    |
|                                   | 150          | —          | —       | —    |
|                                   | 200          | —          | —       | —    |
|                                   | Botm.        | —          | —       | —    |

| Date                   |              | ③ August |      |      |      |      |       |
|------------------------|--------------|----------|------|------|------|------|-------|
| Sta. No.               |              | 02       | 03   | 04   | 05   | 06   | 07    |
| Day                    |              | 2        | 2    | 2    | 1    | 1    | 1     |
| Item                   | Time<br>Z(m) | 0520     | 0355 | 0115 | 2210 | 1907 | 1610  |
| O <sub>2</sub>         | 0            | 5.29     | 5.41 | 5.44 | 5.53 | 5.28 | 5.51  |
|                        | 10           | 5.10     | 5.29 | 5.42 | 5.59 | 5.26 | 5.54  |
|                        | 20           | 4.98     | 5.24 | 5.27 | 5.68 | 5.16 | 5.56  |
|                        | 30           | 4.89     | 5.17 | 5.24 | 5.23 | 5.04 | 5.61  |
|                        | 50           | —        | 5.14 | 5.05 | 5.18 | 5.02 | 5.25  |
|                        | 75           | —        | 4.99 | 5.15 | 5.14 | 5.00 | 5.14  |
|                        | 100          | —        | 4.83 | 4.60 | 5.12 | 4.78 | 5.12  |
|                        | 125          | —        | 4.71 | 4.45 | 5.07 | 4.70 | 5.11  |
|                        | 150          | —        | —    | 4.50 | 4.98 | 4.66 | 5.08  |
|                        | 200          | —        | —    | 4.38 | 4.08 | 4.37 | 4.94  |
|                        | 250          | —        | —    | 4.25 | 4.68 | 4.33 | 4.72  |
|                        | 300          | —        | —    | 4.19 | 4.45 | 4.35 | 4.64  |
|                        | 400          | —        | —    | 3.98 | 4.29 | 4.15 | 4.32  |
|                        | 500          | —        | —    | 3.19 | 3.90 | 3.30 | 4.06  |
|                        | 600          | —        | —    | 3.14 | 3.50 | 2.96 | 2.86  |
|                        | 700          | —        | —    | 2.95 | 3.26 | 2.90 | —     |
|                        | 800          | —        | —    | 2.90 | 3.10 | 2.86 | —     |
|                        | Botm.        | 4.73     | 4.64 | —    | —    | —    | —     |
| cc<br>—<br>L<br><br>pH | 0            | 8.00     | 7.93 | 7.80 | 7.92 | 7.80 | 7.69  |
|                        | 10           | 8.00     | 7.81 | 7.97 | 7.96 | 7.70 | 7.92  |
|                        | 20           | 7.79     | 7.80 | 7.95 | 7.91 | 7.90 | 7.90  |
|                        | 30           | 8.01     | 7.71 | 7.95 | 7.38 | 7.85 | 7.89  |
|                        | 50           | —        | 7.75 | 7.80 | 7.36 | 7.56 | 7.95  |
|                        | 75           | —        | 7.29 | 7.82 | 7.36 | 7.45 | 7.54  |
|                        | 100          | —        | 7.68 | 7.54 | 7.60 | 7.56 | 7.65  |
|                        | 125          | —        | 7.66 | 7.59 | 7.60 | 7.56 | 7.65  |
|                        | 150          | —        | —    | 7.64 | 7.60 | 7.53 | 7.62  |
|                        | 200          | —        | —    | 7.65 | 7.58 | 7.60 | 7.68  |
|                        | 250          | —        | —    | 7.67 | 7.55 | 7.60 | 7.63  |
|                        | 300          | —        | —    | 7.65 | 7.60 | 7.57 | 7.61  |
|                        | 400          | —        | —    | 7.54 | 7.58 | 7.43 | 7.069 |
|                        | 500          | —        | —    | 7.56 | 7.70 | 7.48 | 7.60  |
|                        | 600          | —        | —    | 7.54 | 7.70 | 7.47 | 7.57  |
|                        | 700          | —        | —    | 7.51 | 7.70 | 7.47 | —     |
|                        | 800          | —        | —    | 7.84 | 7.70 | 7.47 | —     |
|                        | Botm.        | 7.93     | 7.67 | —    | —    | —    | —     |

| Date           |              | August |      | July |      |      |      |
|----------------|--------------|--------|------|------|------|------|------|
| Sta. No.       |              | 08     | 09   | 10   | 11   | 12   | 13   |
| Day            |              | 1      | 1    | 31   | 31   | 31   | 30   |
| Item           | Time<br>Z(m) | 1300   | 1000 | 0625 | 0330 | 0030 | 2020 |
| O <sub>2</sub> | 0            | 5.35   | 5.27 | 5.48 | 5.21 | 5.29 | 5.25 |
|                | 10           | 5.29   | 5.50 | 5.52 | 5.05 | 5.31 | 5.29 |
|                | 20           | 5.26   | 5.45 | 5.63 | 5.29 | 5.40 | 5.44 |
|                | 30           | 5.23   | 5.31 | 5.34 | 5.31 | 5.27 | 5.31 |
|                | 50           | 5.08   | 5.24 | 5.25 | 5.27 | 5.18 | 5.28 |
|                | 75           | 5.01   | 5.02 | 5.21 | 5.02 | 5.14 | 4.98 |
|                | 100          | 4.81   | 5.00 | 5.04 | 4.91 | 4.95 | 4.83 |
|                | 125          | 4.78   | 4.83 | 4.89 | 4.83 | 4.29 | 4.80 |
|                | 150          | 4.77   | 4.67 | 4.81 | 4.75 | 4.82 | 4.70 |
|                | 200          | 4.72   | 4.29 | 4.61 | 4.64 | 4.55 | 4.50 |
|                | 250          | 4.39   | 4.22 | 4.52 | 4.58 | 4.45 | 4.40 |
|                | 300          | 4.28   | 4.21 | 4.39 | 4.48 | 4.43 | 4.30 |
|                | 400          | —      | 4.05 | —    | 4.06 | —    | 4.13 |
|                | 500          | —      | 3.46 | —    | 3.74 | —    | 3.96 |
|                | 600          | —      | 3.00 | —    | 3.19 | —    | 3.86 |
| cc<br>L        | 700          | —      | —    | —    | 3.00 | —    | 3.82 |
|                | 800          | —      | —    | —    | 2.92 | —    | 3.77 |
|                | Botm.        | —      | —    | —    | —    | —    | —    |
| pH             | 0            | 7.85   | 7.82 | 7.70 | 7.60 | 7.55 | 7.86 |
|                | 10           | 7.96   | 7.78 | 8.00 | 7.61 | 7.78 | 7.95 |
|                | 20           | 7.88   | 7.66 | 7.89 | 7.96 | 7.88 | 7.79 |
|                | 30           | 7.80   | 7.64 | 7.80 | 7.96 | 7.84 | 7.79 |
|                | 50           | 7.69   | 7.76 | 8.00 | 7.70 | 7.81 | 7.45 |
|                | 75           | 7.59   | 7.95 | 8.07 | 7.77 | 7.81 | 7.59 |
|                | 100          | 7.59   | 7.98 | 7.90 | 7.65 | 7.80 | 7.61 |
|                | 125          | 7.58   | 7.89 | 7.82 | 7.69 | 7.70 | 7.62 |
|                | 150          | 7.55   | 7.93 | 7.80 | 7.88 | 7.76 | 7.68 |
|                | 200          | 7.51   | 7.96 | 7.80 | 7.82 | 7.73 | 7.43 |
|                | 250          | 7.51   | 7.93 | 7.71 | 7.79 | 7.61 | 7.38 |
|                | 300          | 7.48   | 7.81 | 7.69 | 7.81 | 7.52 | 7.38 |
|                | 400          | —      | 7.71 | —    | 7.81 | —    | 7.43 |
|                | 500          | —      | 7.61 | —    | 7.62 | —    | 7.47 |
|                | 600          | —      | 7.58 | —    | 7.50 | —    | 7.45 |
|                | 700          | —      | 7.57 | —    | 7.50 | —    | 7.44 |
|                | 800          | —      | 7.58 | —    | 7.50 | —    | 7.44 |
|                | Botm.        | —      | —    | —    | —    | —    | —    |

## ④ December

| 02   | 04   | 06   | 08   | 10   | 12   |
|------|------|------|------|------|------|
| 4    | 4    | 4    | 4    | 3    | 3    |
| 1550 | 1255 | 0725 | 0205 | 2105 | 1515 |
| 5.98 | 6.00 | 5.21 | 5.05 | 5.28 | 5.26 |
| 6.06 | 5.98 | 4.35 | 5.05 | 5.25 | 4.85 |
| 6.06 | 6.02 | 4.11 | 5.01 | 5.36 | 5.42 |
| —    | 6.00 | 3.61 | 4.95 | 5.38 | 5.67 |
| —    | 5.27 | 4.79 | 4.86 | 5.46 | 5.41 |
| —    | 6.27 | 4.95 | 4.02 | 4.50 | 5.29 |
| —    | 6.32 | 6.55 | 4.60 | 3.51 | 4.02 |
| —    | 6.45 | 6.19 | 5.78 | 5.00 | 5.10 |
| —    | 6.52 | 6.28 | 5.97 | 6.10 | 6.24 |
| —    | 6.47 | 6.47 | 6.05 | 6.68 | 6.72 |
| —    | 5.92 | 6.23 | 6.01 | 7.20 | 6.66 |
| —    | 6.73 | 5.99 | 5.95 | 6.89 | 6.71 |
| —    | 6.10 | 5.61 | 5.57 | 6.41 | 6.98 |
| —    | —    | 5.23 | 5.40 | 6.28 | 5.80 |
| —    | —    | 5.07 | 5.21 | 6.70 | 5.37 |
| —    | —    | —    | 5.00 | 5.33 | —    |
| —    | —    | —    | 4.90 | 5.07 | —    |
| 6.04 | —    | —    | —    | —    | —    |
| 8.22 | 8.23 | 7.90 | 8.22 | 8.00 | 8.23 |
| 8.18 | 8.23 | 7.92 | 8.28 | 8.13 | 8.26 |
| 8.15 | 8.27 | 8.25 | 3.24 | 8.06 | 8.17 |
| —    | 8.12 | 7.95 | 8.98 | 8.08 | 8.10 |
| —    | 8.09 | 7.69 | 7.99 | 8.10 | 8.10 |
| —    | 8.00 | 7.77 | 8.14 | 8.21 | 8.06 |
| —    | 7.99 | 7.86 | 8.15 | 8.07 | 8.00 |
| —    | 7.95 | 7.99 | 8.04 | 8.00 | 7.76 |
| —    | 7.93 | 7.90 | 8.02 | 8.00 | 7.78 |
| —    | 7.97 | 8.07 | 7.95 | 7.96 | 7.78 |
| —    | 7.99 | 8.02 | 7.91 | 7.87 | 7.62 |
| —    | 7.91 | 7.91 | 7.90 | 7.83 | 7.70 |
| —    | 7.88 | 7.82 | 7.90 | 7.83 | 7.71 |
| —    | —    | 7.92 | 7.89 | 7.82 | 7.70 |
| —    | —    | 7.93 | 7.88 | 7.75 | 7.70 |
| —    | —    | —    | 7.87 | 7.60 | —    |
| —    | —    | —    | 7.86 | 7.50 | —    |
| 8.01 | —    | —    | —    | —    | —    |

| Date                              |              | ④ December |      |      |      |      |      |
|-----------------------------------|--------------|------------|------|------|------|------|------|
| Sta. No.                          |              | 02         | 04   | 06   | 08   | 10   | 12   |
| Day                               |              | 4          | 4    | 4    | 4    | 3    | 3    |
| Item                              | Time<br>Z(m) | 1550       | 1255 | 0725 | 0205 | 2105 | 1515 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | 0.95       | 1.23 | 1.00 | 1.23 | 0.48 | 0.45 |
|                                   | 10           | 0.73       | 0.70 | 0.65 | 0.50 | 0.45 | 0.45 |
|                                   | 20           | 0.88       | 0.65 | 1.68 | 0.50 | 0.50 | 0.75 |
|                                   | 30           | —          | 0.73 | 1.45 | 0.68 | 0.70 | 0.80 |
|                                   | 50           | —          | 2.08 | 1.58 | 0.63 | 0.80 | 0.90 |
|                                   | 75           | —          | 1.50 | 1.34 | 1.08 | 0.91 | 0.95 |
|                                   | 100          | —          | 1.54 | 1.42 | 1.08 | 1.10 | 1.05 |
|                                   | 125          | —          | 1.75 | 1.53 | 1.08 | 1.45 | 1.17 |
|                                   | 150          | —          | 1.83 | 1.75 | 1.11 | 1.52 | 1.24 |
|                                   | 200          | —          | 2.50 | 2.15 | 1.50 | 1.65 | 1.89 |
|                                   | 250          | —          | 2.32 | 1.97 | 1.71 | 2.34 | 2.20 |
|                                   | 300          | —          | 2.13 | 1.96 | 1.57 | 2.35 | 2.14 |
|                                   | 400          | —          | 2.35 | 2.15 | 2.32 | 1.75 | 2.45 |
|                                   | 500          | —          | —    | 2.26 | 2.47 | 1.71 | 2.65 |
|                                   | 600          | —          | —    | 2.21 | 2.59 | 1.78 | 2.67 |
|                                   | 700          | —          | —    | —    | 2.68 | 1.88 | —    |
|                                   | 800          | —          | —    | —    | 1.95 | 1.95 | —    |
|                                   | Botm.        | 0.93       | —    | —    | —    | —    | —    |

# 105선 해양관측성적

Oceanographic Data, Line 105

| Date           |       | ① February |      |      |      | ② April |      |      |      |
|----------------|-------|------------|------|------|------|---------|------|------|------|
| Sta. No.       |       | 04         | 05   | 07   | 09   | 04      | 06   | 08   | 09   |
| Day            |       | 23         | 23   | 23   | 23   | 16      | 16   | 17   | 17   |
| Item           | Time  | 1000       | 1115 | 1545 | 2040 | 1705    | 2038 | 0045 | 0250 |
|                | Z(m)  |            |      |      |      |         |      |      |      |
| O <sub>2</sub> | 0     | 6.57       | 6.20 | 6.23 | 5.96 | 6.08    | 6.11 | 6.06 | 6.08 |
|                | 10    | 6.39       | 5.94 | 5.98 | 6.14 | 5.96    | 6.08 | 6.02 | 6.06 |
|                | 25    | 6.55       | 5.80 | 6.02 | 6.14 | 5.96    | 6.08 | 6.02 | 6.04 |
|                | 50    | 6.74       | 5.82 | 6.16 | 6.06 | 5.90    | 6.06 | 6.02 | 6.11 |
|                | 100   | 6.96       | 6.00 | 6.45 | 6.06 | 5.75    | 5.98 | 6.04 | 5.75 |
|                | 150   | 6.23       | 6.06 | 6.16 | 6.08 | 5.62    | 5.96 | 6.04 | 5.94 |
|                | 200   | —          | 6.10 | 6.14 | 6.14 | —       | 5.90 | 6.06 | 6.00 |
|                | Botm. | 6.14       | 6.16 | 6.14 | 6.14 | 5.62    | 5.85 | 5.98 | 6.04 |
| pH             | 0     | —          | —    | —    | —    | —       | —    | —    | —    |
|                | 10    | —          | —    | —    | —    | —       | —    | —    | —    |
|                | 25    | —          | —    | —    | —    | —       | —    | —    | —    |
|                | 50    | —          | —    | —    | —    | —       | —    | —    | —    |
|                | 100   | —          | —    | —    | —    | —       | —    | —    | —    |
|                | 150   | —          | —    | —    | —    | —       | —    | —    | —    |
|                | 200   | —          | —    | —    | —    | —       | —    | —    | —    |
|                | Botm. | —          | —    | —    | —    | —       | —    | —    | —    |

| Date                            |       | ③ August |      |      |      |      |      |      |      |      |      |      |
|---------------------------------|-------|----------|------|------|------|------|------|------|------|------|------|------|
| Sta. No.                        |       | 03       | 04   | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   |
| Day                             |       | 28       | 28   | 28   | 28   | 28   | 28   | 29   | 29   | 30   | 30   | 30   |
| Item                            | Time  | 1035     | 1140 | 1330 | 1625 | 2055 | 2310 | 0205 | 0618 | 1135 | 1415 | 1645 |
|                                 | Z(m)  |          |      |      |      |      |      |      |      |      |      |      |
| O <sub>2</sub><br><br>cc<br>/ L | 0     | 5.44     | 5.56 | 5.54 | 5.26 | 5.31 | 5.39 | 5.40 | 5.25 | 5.26 | 5.24 | 5.27 |
|                                 | 10    | 5.54     | 5.62 | 5.58 | 6.04 | 5.33 | 5.37 | 5.30 | 5.27 | 5.18 | 5.27 | 5.23 |
|                                 | 20    | 5.48     | 5.41 | 5.56 | 5.76 | 5.15 | 5.25 | 5.20 | 5.29 | 5.11 | 5.39 | 5.18 |
|                                 | 30    | 5.32     | 5.29 | 6.16 | 5.90 | 5.06 | 5.20 | 5.18 | 5.33 | 5.02 | 5.29 | 5.12 |
|                                 | 50    | 5.23     | 5.23 | 6.25 | 5.98 | 5.04 | 5.08 | 5.07 | 5.35 | 5.01 | 5.12 | 5.04 |
|                                 | 75    | —        | 5.17 | 6.29 | 6.09 | 4.91 | 4.77 | 5.04 | 5.17 | 4.91 | 4.93 | 5.02 |
|                                 | 100   | —        | 5.08 | 6.32 | 5.53 | 4.80 | 4.70 | 4.92 | 5.14 | 4.79 | 4.86 | 4.97 |
|                                 | 125   | —        | 5.04 | 6.34 | 5.36 | 4.72 | 4.69 | 4.83 | 5.07 | 4.58 | 4.46 | 4.87 |
|                                 | 150   | —        | 4.93 | 6.31 | 5.26 | 4.68 | 4.03 | 4.67 | 4.92 | 4.52 | 4.41 | 4.67 |
|                                 | 200   | —        | —    | 6.19 | 5.16 | 4.64 | 4.48 | 4.29 | 4.81 | 4.49 | 4.38 | 4.46 |
|                                 | 250   | —        | —    | 5.92 | 5.12 | 4.39 | 4.38 | 4.24 | —    | 4.47 | 4.37 | 4.40 |
|                                 | 300   | —        | —    | 5.04 | 5.09 | 4.21 | 4.28 | 4.19 | —    | 4.39 | 4.30 | 4.25 |
|                                 | 400   | —        | —    | —    | 5.02 | 4.18 | —    | 4.14 | —    | 4.27 | —    | 4.12 |
|                                 | 500   | —        | —    | —    | 4.69 | 4.00 | —    | 3.99 | —    | 3.93 | —    | 3.94 |
|                                 | 600   | —        | —    | —    | 4.18 | 3.89 | —    | 3.73 | —    | 3.54 | —    | 3.65 |
|                                 | 700   | —        | —    | —    | —    | 3.85 | —    | 3.49 | —    | 3.23 | —    | 3.29 |
|                                 | 800   | —        | —    | —    | —    | 3.83 | —    | 3.09 | —    | 2.97 | —    | 2.98 |
|                                 | Botm. | 5.21     | 4.91 | 4.83 | 4.12 | —    | —    | —    | 4.75 | —    | —    | —    |
| pH                              | 0     | 7.89     | 7.76 | 7.81 | 7.72 | 8.06 | 8.03 | 7.76 | 7.50 | 7.30 | 7.38 | 7.84 |
|                                 | 10    | 7.89     | 7.68 | 7.84 | 7.81 | 8.08 | 8.02 | 7.79 | 7.81 | 7.25 | 7.55 | 7.90 |
|                                 | 20    | 7.93     | 7.68 | 7.88 | 7.79 | 8.09 | 7.88 | 7.70 | 7.78 | 7.09 | 7.91 | 7.86 |
|                                 | 30    | 7.92     | 7.73 | 7.82 | 7.72 | 7.96 | 7.89 | 7.65 | 7.69 | 7.49 | 7.53 | 7.84 |
|                                 | 50    | 7.91     | 7.70 | 7.81 | 7.78 | 7.90 | 7.91 | 7.83 | 7.64 | 7.32 | 7.46 | 7.84 |
|                                 | 75    | —        | 7.79 | 7.82 | 7.78 | 8.01 | 7.90 | 7.60 | 7.52 | 7.47 | 7.72 | 7.75 |
|                                 | 100   | —        | 7.69 | 7.80 | 7.72 | 8.04 | 7.92 | 7.60 | 7.85 | 7.59 | 7.69 | 7.60 |
|                                 | 125   | —        | 7.69 | 7.80 | 7.72 | 8.03 | 7.95 | 7.69 | 7.85 | 7.30 | 7.83 | 7.71 |
|                                 | 150   | —        | 7.61 | 7.79 | 7.72 | 8.02 | 7.94 | 7.94 | 7.76 | 7.28 | 7.76 | 7.44 |
|                                 | 200   | —        | —    | 7.63 | 7.71 | 7.93 | 7.93 | 7.91 | 7.67 | 7.28 | 7.69 | 7.32 |
|                                 | 250   | —        | —    | 7.53 | 7.64 | 7.68 | 7.92 | 7.89 | —    | 7.29 | 7.75 | 7.43 |
|                                 | 300   | —        | —    | 7.52 | 7.58 | 8.19 | 7.84 | 7.71 | —    | 7.31 | 7.83 | 7.45 |
|                                 | 400   | —        | —    | —    | 7.55 | 7.93 | —    | 7.60 | —    | 7.63 | —    | 7.48 |
|                                 | 500   | —        | —    | —    | 7.91 | 8.03 | —    | 7.62 | —    | 7.60 | —    | 7.32 |
|                                 | 600   | —        | —    | —    | 7.58 | 8.02 | —    | 7.62 | —    | 7.55 | —    | 7.31 |
|                                 | 700   | —        | —    | —    | —    | 8.02 | —    | 7.63 | —    | 7.53 | —    | 7.31 |
|                                 | 800   | —        | —    | —    | —    | 8.01 | —    | 7.65 | —    | 7.51 | —    | 7.33 |
|                                 | Botm. | 7.90     | 7.60 | 7.43 | 7.51 | —    | —    | —    | 7.50 | —    | —    | —    |



[illegible]

# 104 선 해양 관측 성적

Oceanographic Data, Line 104

| Date                            |              | ① February |      |      | ② April |      |
|---------------------------------|--------------|------------|------|------|---------|------|
| Sta. No.                        |              | 09         | 07   | 05   | 05      | 08   |
| Day                             |              | 26         | 26   | 26   | 20      | 20   |
| Item                            | Time<br>Z(m) | 1540       | 2000 | 2315 | 1635    | 2110 |
| O <sub>2</sub><br><br>cc<br>/ L | 0            | 6.12       | 6.24 | 6.76 | 6.08    | 6.15 |
|                                 | 10           | 6.66       | 6.47 | 6.90 | 6.08    | 6.08 |
|                                 | 25           | 6.45       | 6.37 | 6.86 | 6.06    | 6.06 |
|                                 | 50           | 6.88       | 6.43 | 6.86 | 5.98    | 6.06 |
|                                 | 100          | 6.86       | 6.14 | 6.78 | 5.85    | 6.06 |
|                                 | 150          | 6.86       | 6.04 | 6.68 | —       | 5.94 |
|                                 | 200          | 6.74       | 5.98 | —    | —       | 5.88 |
|                                 | Botm.        | 6.59       | 5.94 | 6.66 | 5.85    | 5.79 |
| pH                              | 0            | —          | —    | —    | —       | —    |
|                                 | 10           | —          | —    | —    | —       | —    |
|                                 | 25           | —          | —    | —    | —       | —    |
|                                 | 50           | —          | —    | —    | —       | —    |
|                                 | 100          | —          | —    | —    | —       | —    |
|                                 | 150          | —          | —    | —    | —       | —    |
|                                 | 200          | —          | —    | —    | —       | —    |
|                                 | Botm.        | —          | —    | —    | —       | —    |

| Date                            |              | ③ August |      |      |      |      |      |      |      |      |      |
|---------------------------------|--------------|----------|------|------|------|------|------|------|------|------|------|
| Sta. No.                        |              | 04       | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   |
| Day                             |              | 27       | 27   | 26   | 26   | 26   | 26   | 26   | 26   | 26   | 25   |
| Item                            | Time<br>Z(m) | 0400     | 0230 | 2205 | 1935 | 1620 | 0605 | 1115 | 0347 | 0120 | 2224 |
| O <sub>2</sub><br><br>cc<br>/ L | 0            | 5.33     | 5.33 | 5.47 | 5.31 | 5.31 | 5.39 | 5.33 | 5.44 | 5.04 | 5.36 |
|                                 | 10           | 5.27     | 5.29 | 5.49 | 5.12 | 5.35 | 5.46 | 5.25 | 5.45 | 5.73 | 5.30 |
|                                 | 20           | 5.24     | 5.23 | 5.49 | 5.07 | 5.43 | 5.41 | 5.16 | 5.47 | 5.68 | 5.24 |
|                                 | 30           | 5.18     | 5.18 | 5.44 | 5.05 | 5.48 | 5.16 | 5.14 | 5.25 | 5.44 | 5.22 |
|                                 | 50           | 5.14     | 5.14 | 5.02 | 4.97 | 5.50 | 5.11 | 5.13 | 5.04 | 5.31 | 5.18 |
|                                 | 75           | 4.98     | 5.12 | 4.79 | 4.81 | 5.27 | 5.04 | 5.12 | 4.91 | 4.95 | 5.12 |
|                                 | 100          | 4.87     | 5.08 | 4.71 | 4.75 | 5.14 | 4.76 | 5.04 | 4.91 | 4.93 | 5.03 |
|                                 | 125          | —        | 5.07 | 4.78 | 4.62 | 5.11 | 4.69 | 4.74 | 4.80 | 4.89 | 4.97 |
|                                 | 150          | —        | 5.05 | 4.64 | 4.54 | 5.09 | 4.66 | 4.60 | 4.77 | 4.84 | 4.93 |
|                                 | 200          | —        | —    | 4.59 | 4.38 | 5.90 | 4.49 | 4.55 | 4.74 | 4.68 | 4.87 |
|                                 | 250          | —        | —    | 4.55 | 4.33 | 4.63 | 4.44 | 4.40 | 4.71 | 4.32 | 4.60 |
|                                 | 300          | —        | —    | 4.44 | 4.26 | 4.18 | 4.33 | 4.38 | 4.40 | 4.06 | 4.41 |
|                                 | 400          | —        | —    | 4.20 | 4.18 | —    | 3.86 | 4.29 | 3.02 | —    | 3.94 |
|                                 | 500          | —        | —    | 4.15 | 4.06 | —    | 3.76 | 3.96 | 3.84 | —    | 3.65 |
|                                 | 600          | —        | —    | 3.89 | 4.03 | —    | 3.57 | 3.86 | 3.48 | —    | 3.42 |
|                                 | 700          | —        | —    | —    | —    | —    | 3.21 | 3.78 | 3.26 | —    | 3.22 |
|                                 | 800          | —        | —    | —    | —    | —    | 3.15 | 3.47 | 3.11 | —    | 3.03 |
|                                 | Botm.        | 4.81     | 4.62 | —    | —    | —    | —    | —    | —    | —    | —    |
| pH                              | 0            | 7.75     | 7.90 | 7.59 | 7.59 | 7.82 | 7.82 | 7.74 | 7.89 | 7.71 | 7.49 |
|                                 | 10           | 7.81     | 7.97 | 7.54 | 7.82 | 7.91 | 7.96 | 7.79 | 7.92 | 7.79 | 7.55 |
|                                 | 20           | 7.91     | 7.78 | 7.70 | 7.73 | 7.79 | 7.59 | 7.90 | 7.97 | 7.74 | 7.62 |
|                                 | 30           | 7.87     | 7.89 | 7.62 | 7.79 | 7.58 | 7.52 | 7.87 | 7.95 | 7.61 | 7.60 |
|                                 | 50           | 7.80     | 7.89 | 7.63 | 7.79 | 7.70 | 7.52 | 7.82 | 7.82 | 7.73 | 7.53 |
|                                 | 75           | 7.74     | 7.88 | 7.66 | 7.83 | 7.41 | 7.60 | 7.70 | 7.73 | 7.79 | 7.53 |
|                                 | 100          | 3        | 7.83 | 7.48 | 7.69 | 7.59 | 7.74 | 7.68 | 7.54 | 7.75 | 7.50 |
|                                 | 125          | —        | 7.83 | 7.53 | 7.69 | 7.65 | 7.78 | 7.61 | 7.49 | 7.69 | 7.50 |
|                                 | 150          | —        | 7.83 | 7.65 | 7.71 | 7.64 | 7.76 | 7.62 | 7.64 | 7.68 | 7.50 |
|                                 | 200          | —        | —    | 7.67 | 7.71 | 7.63 | 7.73 | 7.67 | 7.80 | 7.45 | 7.50 |
|                                 | 250          | —        | —    | 7.63 | 7.68 | 7.68 | 7.79 | 7.69 | 7.81 | 7.50 | 7.44 |
|                                 | 300          | —        | —    | 7.61 | 7.54 | 7.58 | 7.73 | 7.71 | 7.81 | 7.53 | 7.32 |
|                                 | 400          | —        | —    | 7.69 | 7.43 | —    | 7.68 | 7.67 | 7.74 | —    | 7.18 |
|                                 | 500          | —        | —    | 7.66 | 7.42 | —    | 7.58 | 7.63 | 7.72 | —    | 7.14 |
|                                 | 600          | —        | —    | 7.63 | 7.41 | —    | 7.53 | 7.57 | 7.69 | —    | 7.12 |
|                                 | 700          | —        | —    | —    | —    | —    | 7.51 | 7.50 | 7.65 | —    | 7.12 |
|                                 | 800          | —        | —    | —    | —    | —    | 7.56 | 7.55 | 7.61 | —    | 7.11 |
|                                 | Botm.        | 7.66     | 7.76 | —    | —    | —    | —    | —    | —    | —    | —    |

[illegible]

| Date                            |              | ④ December |      |      |      |      |      |
|---------------------------------|--------------|------------|------|------|------|------|------|
| Sta. No.                        |              | 04         | 05   | 06   | 08   | 10   | 12   |
| Day                             |              | 2          | 2    | 2    | 2    | 3    | 3    |
| Item                            | Time<br>Z(m) | 1330       | 1445 | 1635 | 2200 | 0330 | 0803 |
| O <sub>2</sub><br><br>cc<br>/ L | 0            | 5.32       | 5.09 | 5.07 | 5.36 | 5.54 | 5.61 |
|                                 | 10           | 5.32       | 5.11 | 4.93 | 5.55 | 5.88 | 5.41 |
|                                 | 20           | 5.30       | 5.13 | 4.95 | 5.36 | 6.29 | 5.36 |
|                                 | 30           | 4.74       | 3.94 | 4.95 | 5.08 | 5.59 | 5.48 |
|                                 | 50           | 5.13       | 5.71 | 4.95 | 5.35 | 5.62 | 5.36 |
|                                 | 75           | 6.08       | 5.71 | 4.85 | 5.24 | 5.46 | 5.98 |
|                                 | 100          | —          | 5.75 | 4.90 | 4.89 | 5.79 | 5.48 |
|                                 | 125          | —          | 5.89 | 5.88 | 5.20 | 4.74 | 6.16 |
|                                 | 150          | —          | 6.08 | 5.88 | 6.00 | 4.66 | 6.24 |
|                                 | 200          | —          | —    | 5.72 | 6.08 | 5.26 | 6.18 |
|                                 | 250          | —          | —    | 5.73 | 6.09 | 6.20 | 6.07 |
|                                 | 300          | —          | —    | 5.75 | 6.15 | 6.29 | 6.03 |
|                                 | 400          | —          | —    | 5.77 | 6.15 | 5.76 | 5.62 |
|                                 | 500          | —          | —    | —    | 6.01 | 5.61 | 5.27 |
|                                 | 600          | —          | —    | —    | 5.76 | 5.68 | 5.17 |
|                                 | 700          | —          | —    | —    | 5.46 | 5.86 | 5.11 |
|                                 | 800          | —          | —    | —    | —    | 6.08 | 5.09 |
|                                 | Botm.        | 6.27       | —    | —    | —    | —    | —    |
| pH                              | 0            | 8.02       | 7.90 | 7.75 | 7.95 | 8.22 | 8.08 |
|                                 | 10           | 8.03       | 7.92 | 7.69 | 8.10 | 8.18 | 8.13 |
|                                 | 20           | 7.97       | 7.83 | 7.69 | 8.09 | 8.18 | 8.20 |
|                                 | 30           | 7.92       | 7.83 | 7.69 | 8.05 | 8.18 | 8.10 |
|                                 | 50           | 7.86       | 7.75 | 7.81 | 8.00 | 8.18 | 8.10 |
|                                 | 75           | 7.82       | 7.71 | 7.93 | 7.90 | 8.20 | 8.00 |
|                                 | 100          | —          | 7.66 | 8.02 | 8.02 | 8.12 | 7.99 |
|                                 | 125          | —          | 7.62 | 8.06 | 8.02 | 8.01 | 7.93 |
|                                 | 150          | —          | 7.08 | 8.14 | 8.02 | 7.97 | 7.85 |
|                                 | 200          | —          | —    | 8.04 | 8.05 | 7.97 | 9.80 |
|                                 | 250          | —          | —    | 7.84 | 8.09 | 7.79 | 7.76 |
|                                 | 300          | —          | —    | 7.80 | 8.03 | 7.75 | 7.68 |
|                                 | 400          | —          | —    | 7.68 | 7.92 | 7.75 | 7.42 |
|                                 | 500          | —          | —    | —    | 7.91 | 7.74 | 7.55 |
|                                 | 600          | —          | —    | —    | 7.85 | 7.72 | 7.53 |
|                                 | 700          | —          | —    | —    | 7.77 | 7.68 | 7.51 |
|                                 | 800          | —          | —    | —    | —    | 7.64 | 7.50 |
|                                 | Botm.        | 7.80       | 7.51 | —    | —    | —    | —    |

| Date                              |       | ④ December |      |      |      |      |      |
|-----------------------------------|-------|------------|------|------|------|------|------|
| Sta. No.                          |       | 04         | 05   | 06   | 08   | 10   | 12   |
| Day                               |       | 2          | 2    | 2    | 2    | 3    | 3    |
| Item                              | Time  | 1330       | 1445 | 1635 | 2200 | 0330 | 0803 |
|                                   | Z(m)  |            |      |      |      |      |      |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0     | 1.85       | 1.25 | 0.90 | 0.83 | 0.08 | 2.30 |
|                                   | 10    | 1.00       | 0.83 | 0.90 | 0.33 | 0.08 | 0.63 |
|                                   | 20    | 1.70       | 1.28 | 0.95 | 0.46 | 0.25 | 0.73 |
|                                   | 30    | 1.20       | 1.83 | 0.95 | 0.51 | 0.60 | 1.13 |
|                                   | 50    | 2.20       | 1.95 | 1.75 | 0.61 | 0.71 | 1.20 |
|                                   | 75    | 2.20       | 1.85 | 2.13 | 0.66 | 0.99 | 1.08 |
|                                   | 100   | —          | 1.83 | 1.45 | 1.16 | 1.70 | 1.20 |
|                                   | 125   | —          | 1.83 | 1.16 | 1.19 | 1.20 | 1.42 |
|                                   | 150   | —          | 1.84 | 1.16 | 1.20 | 1.20 | 1.45 |
|                                   | 200   | —          | —    | 0.04 | 1.19 | 1.25 | 1.51 |
|                                   | 250   | —          | —    | 1.92 | 1.49 | 1.05 | 1.70 |
|                                   | 300   | —          | —    | 1.75 | 1.65 | 1.46 | 1.70 |
|                                   | 400   | —          | —    | 1.58 | 2.26 | 2.13 | 2.88 |
|                                   | 500   | —          | —    | —    | 2.37 | —    | 2.28 |
|                                   | 600   | —          | —    | —    | 2.35 | —    | 2.36 |
|                                   | 700   | —          | —    | —    | 2.35 | —    | 2.44 |
|                                   | 800   | —          | —    | —    | —    | 2.60 | 2.58 |
|                                   | Botm. | 1.13       | 2.10 | —    | —    | —    | —    |

# 103선 해양관측성적

Oceanographic Data, Line 103

| Date                          |              | ① February |      |      |      | ② April |      |      |
|-------------------------------|--------------|------------|------|------|------|---------|------|------|
| Sta. No.                      |              | 09         | 05   | 07   | 09   | 06      | 08   | 10   |
| Day                           |              | 27         | 27   | 28   | 28   | 21      | 21   | 21   |
| Item                          | Time<br>Z(m) | 0500       | 0545 | 1130 | 1542 | 0645    | 0735 | 1405 |
| O <sub>2</sub><br><br>CC<br>L | 0            | 6.45       | 6.45 | 6.25 | 6.10 | 6.11    | 6.02 | 6.13 |
|                               | 10           | 6.47       | 5.32 | 6.23 | 5.63 | 5.79    | 5.98 | 5.79 |
|                               | 25           | 6.49       | 6.14 | 6.16 | 6.04 | 4.04    | 5.75 | 6.06 |
|                               | 50           | 6.68       | 6.20 | 6.16 | 6.12 | 6.06    | 5.77 | 6.02 |
|                               | 100          | —          | 6.18 | 6.02 | 5.94 | 5.96    | 5.81 | 5.85 |
|                               | 150          | —          | 6.18 | 5.90 | 5.92 | 5.88    | 5.83 | 5.79 |
|                               | 200          | —          | —    | 5.88 | 5.90 | 5.88    | 5.94 | 5.75 |
|                               | Botm.        | 6.27       | 6.14 | 5.84 | 5.84 | 5.79    | 5.94 | 5.46 |
| pH                            | 0            | —          | —    | —    | —    | —       | —    | —    |
|                               | 10           | —          | —    | —    | —    | —       | —    | —    |
|                               | 25           | —          | —    | —    | —    | —       | —    | —    |
|                               | 50           | —          | —    | —    | —    | —       | —    | —    |
|                               | 100          | —          | —    | —    | —    | —       | —    | —    |
|                               | 150          | —          | —    | —    | —    | —       | —    | —    |
|                               | 200          | —          | —    | —    | —    | —       | —    | —    |
|                               | Botm.        | —          | —    | —    | —    | —       | —    | —    |



| Date                        |              | ③ August |      |      |      |      |      |      |      |      |      |
|-----------------------------|--------------|----------|------|------|------|------|------|------|------|------|------|
| Sta. No.                    |              | 04       | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   |
| Day                         |              | 24       | 24   | 24   | 24   | 25   | 25   | 25   | 25   | 25   | 25   |
| Item                        | Time<br>Z(m) | 1905     | 2010 | 2205 | 2400 | 0315 | 0640 | 0945 | 1210 | 1420 | 1645 |
| O <sub>2</sub><br>cc<br>/ L | 0            | 5.31     | 5.30 | 5.23 | 5.32 | 5.26 | 5.22 | 5.29 | 5.12 | 5.50 | 5.25 |
|                             | 10           | 5.15     | 5.28 | 5.14 | 5.15 | 5.23 | 5.25 | 5.27 | 4.20 | 5.64 | 5.23 |
|                             | 20           | 5.12     | 5.44 | 5.12 | 5.14 | 5.21 | 5.31 | 5.26 | 5.18 | 5.79 | 5.16 |
|                             | 30           | 5.08     | 5.63 | 5.06 | 5.12 | 5.09 | 5.29 | 5.29 | 5.12 | 5.77 | 5.14 |
|                             | 50           | 5.01     | 5.23 | 5.00 | 4.92 | 5.04 | 5.22 | 5.23 | 5.10 | 5.79 | 5.02 |
|                             | 75           | 4.91     | 5.14 | 4.91 | 4.81 | 5.02 | 5.05 | 5.23 | 5.07 | 5.79 | 5.01 |
|                             | 100          | —        | 5.14 | 4.70 | 4.76 | 4.94 | 5.03 | 5.08 | 5.05 | 5.49 | 4.99 |
|                             | 125          | —        | 5.12 | 4.66 | 4.70 | 4.91 | 4.95 | 5.02 | 5.02 | 5.38 | 4.93 |
|                             | 150          | —        | 5.05 | —    | 4.69 | 4.89 | 4.95 | 4.97 | 4.98 | 5.29 | 4.85 |
|                             | 200          | —        | —    | —    | 4.68 | 4.85 | 4.87 | 4.91 | 4.89 | 5.23 | 4.56 |
|                             | 250          | —        | —    | —    | 4.59 | 4.83 | 4.80 | 4.79 | 4.82 | 5.20 | 4.48 |
|                             | 300          | —        | —    | —    | 4.46 | 4.73 | 4.70 | 4.59 | 4.73 | 5.14 | 4.47 |
|                             | 400          | —        | —    | —    | 4.37 | 4.69 | 4.48 | —    | 4.54 | —    | 4.25 |
|                             | 500          | —        | —    | —    | 4.24 | 4.24 | 4.37 | —    | 4.35 | —    | 4.13 |
|                             | 600          | —        | —    | —    | 4.12 | 4.02 | 4.23 | —    | 4.22 | —    | 3.97 |
|                             | 700          | —        | —    | —    | —    | 3.94 | 4.04 | —    | 4.13 | —    | 3.62 |
|                             | 800          | —        | —    | —    | —    | 3.89 | 3.88 | —    | 4.10 | —    | 3.28 |
|                             | Botm.        | 4.88     | 5.03 | 4.65 | —    | —    | —    | —    | —    | —    | —    |
| pH                          | 0            | 7.49     | 7.31 | 7.61 | 7.52 | 7.36 | 7.19 | 7.22 | 7.21 | 7.40 | 7.42 |
|                             | 10           | 7.60     | 7.54 | 7.66 | 7.52 | 7.42 | 7.29 | 7.22 | 7.40 | 7.42 | 7.35 |
|                             | 20           | 7.68     | 7.61 | 7.66 | 7.52 | 7.35 | 7.43 | 7.18 | 7.61 | 7.42 | 7.40 |
|                             | 30           | 7.66     | 7.53 | 7.66 | 7.52 | 7.40 | 7.52 | 7.33 | 7.56 | 7.40 | 7.49 |
|                             | 50           | 7.60     | 7.45 | 7.60 | 7.62 | 7.39 | 7.55 | 7.40 | 7.40 | 7.50 | 7.30 |
|                             | 75           | 7.50     | 7.45 | 7.60 | 7.59 | 7.32 | 7.52 | 7.40 | 7.32 | 7.45 | 7.43 |
|                             | 100          | —        | 7.46 | 7.60 | 7.56 | 7.30 | 7.52 | 7.35 | 7.40 | 7.40 | 7.36 |
|                             | 125          | —        | 7.53 | 7.60 | 7.50 | 7.33 | 7.43 | 7.32 | 7.30 | 7.43 | 7.32 |
|                             | 150          | —        | 7.51 | —    | 7.50 | 7.31 | 7.43 | 7.32 | 7.30 | 7.50 | 7.34 |
|                             | 200          | —        | —    | —    | 7.50 | 7.20 | 7.37 | 7.32 | 7.39 | 7.51 | 7.38 |
|                             | 250          | —        | —    | —    | 7.51 | 7.23 | 7.33 | 7.32 | 7.38 | 7.42 | 7.37 |
|                             | 300          | —        | —    | —    | 7.50 | 7.28 | 7.24 | 7.25 | 7.33 | 7.32 | 7.34 |
|                             | 400          | —        | —    | —    | 7.33 | 7.29 | 7.11 | —    | 7.22 | —    | 7.25 |
|                             | 500          | —        | —    | —    | 7.26 | 7.25 | 7.10 | —    | 7.16 | —    | 7.25 |
|                             | 600          | —        | —    | —    | 7.22 | 7.22 | 7.11 | —    | 7.19 | —    | 7.26 |
|                             | 700          | —        | —    | —    | —    | 7.21 | 7.11 | —    | 7.24 | —    | 7.25 |
|                             | 800          | —        | —    | —    | —    | 7.19 | 7.12 | —    | 7.29 | —    | 7.26 |
|                             | Botm.        | 7.39     | 7.51 | 7.58 | —    | —    | —    | —    | —    | —    | —    |

[illegible]

## 102선 해양관측성적

Oceanographic Data, Line 102

| Date                          |              | ① Merch |      |      | February | ② April |      |      |
|-------------------------------|--------------|---------|------|------|----------|---------|------|------|
| Sta. No.                      |              | 04      | 05   | 07   | 09       | 06      | 08   | 10   |
| Day                           |              | 31      | 31   | 31   | 28       | 22      | 21   | 21   |
| Item                          | Time<br>Z(m) | 0820    | 0710 | 0343 | 2310     | 0100    | 2130 | 1710 |
| O <sub>2</sub><br><br>cc<br>L | 0            | 6.18    | 6.06 | 6.00 | 5.94     | 6.13    | 5.98 | 6.11 |
|                               | 10           | 5.94    | 6.00 | 6.04 | 6.06     | 6.08    | 5.92 | 6.06 |
|                               | 25           | 5.94    | 5.92 | 6.04 | 6.00     | 5.96    | 5.75 | 6.00 |
|                               | 50           | —       | 5.90 | 6.00 | 5.94     | 5.67    | 5.56 | 5.88 |
|                               | 100          | —       | 5.90 | 6.00 | 5.90     | 5.60    | 5.44 | 5.75 |
|                               | 150          | —       | 6.02 | 5.94 | 5.86     | 5.60    | 5.39 | 5.73 |
|                               | 200          | —       | —    | 5.92 | 5.86     | 5.60    | 5.35 | 5.73 |
|                               | Botm.        | 5.90    | 5.94 | 5.88 | 5.82     | 5.60    | 5.35 | 5.42 |
| pH                            | 0            | —       | —    | —    | —        | —       | —    | —    |
|                               | 10           | —       | —    | —    | —        | —       | —    | —    |
|                               | 20           | —       | —    | —    | —        | —       | —    | —    |
|                               | 50           | —       | —    | —    | —        | —       | —    | —    |
|                               | 100          | —       | —    | —    | —        | —       | —    | —    |
|                               | 150          | —       | —    | —    | —        | —       | —    | —    |
|                               | 200          | —       | —    | —    | —        | —       | —    | —    |
|                               | Botm.        | —       | —    | —    | —        | —       | —    | —    |

| Date           |              | ③ August |      |      |      |      |      |      |      |      |      |
|----------------|--------------|----------|------|------|------|------|------|------|------|------|------|
| Sta. No.       |              | 04       | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   |
| Day            |              | 19       | 19   | 19   | 19   | 19   | 19   | 18   | 18   | 18   | 18   |
| Item           | Time<br>Z(m) | 1240     | 1135 | 1005 | 0645 | 0305 | 0055 | 2215 | 1940 | 1620 | 1200 |
| O <sub>2</sub> | 0            | 5.37     | 5.32 | 5.39 | 5.31 | 5.29 | 5.27 | 5.31 | 5.12 | 5.44 | 5.29 |
|                | 10           | 5.14     | 5.31 | 5.31 | 5.46 | 5.25 | 5.31 | 5.17 | 5.25 | 5.39 | 5.27 |
|                | 20           | 5.12     | 5.25 | 4.79 | 5.37 | 5.23 | 5.18 | 5.21 | 5.16 | 5.31 | 5.23 |
|                | 30           | 4.17     | 4.97 | 4.60 | 5.12 | 5.23 | 5.12 | 5.16 | 5.12 | 5.27 | 5.14 |
|                | 50           | —        | 4.70 | 4.70 | 5.06 | 5.12 | 5.10 | 5.12 | 5.08 | 5.23 | 5.12 |
|                | 75           | —        | 4.68 | 4.77 | 5.02 | 4.91 | 5.04 | 5.12 | 5.06 | 5.21 | 5.10 |
|                | 100          | —        | 4.66 | 4.75 | 4.93 | 4.85 | 4.72 | 5.08 | 5.00 | 5.18 | 5.00 |
|                | 125          | —        | —    | 4.74 | 4.91 | 4.84 | 4.70 | 5.10 | 4.94 | 5.15 | 4.99 |
|                | 150          | —        | —    | 4.73 | 4.91 | 4.83 | 4.70 | 5.07 | 4.90 | 5.13 | 4.98 |
|                | 200          | —        | —    | 4.71 | 4.80 | 4.71 | 4.68 | 5.02 | 4.84 | 5.08 | 4.91 |
|                | 250          | —        | —    | 4.69 | 4.74 | 4.65 | 4.67 | 4.97 | 4.80 | 5.13 | 4.89 |
|                | 300          | —        | —    | 4.67 | 4.71 | 4.64 | 4.66 | 4.91 | 4.79 | 4.99 | 4.88 |
|                | 400          | —        | —    | 4.66 | 4.37 | —    | 4.59 | —    | 4.31 | 4.84 | 4.85 |
|                | 500          | —        | —    | —    | 4.19 | —    | 4.30 | —    | 4.17 | 4.41 | 4.57 |
|                | 600          | —        | —    | —    | 4.16 | —    | 4.04 | —    | 4.12 | 3.97 | 4.31 |
|                | 700          | —        | —    | —    | 4.08 | —    | 3.97 | —    | 4.03 | 3.53 | 4.22 |
| CC<br>L        | 800          | —        | —    | —    | 3.98 | —    | 3.74 | —    | 3.89 | —    | —    |
|                | 900          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                | Botm.        | 4.69     | 4.62 | 4.29 | —    | —    | —    | —    | —    | —    | 4.12 |
| pH             | 0            | 7.49     | 7.18 | 7.38 | 7.48 | 7.42 | 7.39 | 7.30 | 7.32 | 7.38 | 7.48 |
|                | 10           | 7.47     | 7.16 | 7.45 | 7.46 | 7.38 | 7.46 | 7.23 | 7.46 | 7.32 | 7.54 |
|                | 20           | 7.40     | 7.31 | 7.50 | 7.36 | 7.38 | 7.41 | 7.28 | 7.55 | 7.49 | 7.54 |
|                | 30           | 7.42     | 7.39 | 7.60 | 7.40 | 7.46 | 7.40 | 7.28 | 7.50 | 7.57 | 7.60 |
|                | 50           | —        | 7.35 | 7.55 | 7.31 | 7.43 | 7.40 | 7.46 | 7.49 | 7.60 | 7.61 |
|                | 75           | —        | 7.41 | 7.46 | 7.25 | 7.38 | 7.48 | 7.43 | 7.46 | 7.58 | 7.63 |
|                | 100          | —        | 7.44 | 7.38 | 7.25 | 7.32 | 7.35 | 7.49 | 7.43 | 7.46 | 7.64 |
|                | 125          | —        | —    | 7.35 | 7.23 | 7.29 | 7.32 | 7.53 | 7.40 | 7.42 | 7.63 |
|                | 150          | —        | —    | 7.35 | 7.22 | 7.25 | 7.32 | 7.55 | 7.37 | 7.41 | 7.60 |
|                | 200          | —        | —    | 7.38 | 7.26 | 7.21 | 7.22 | 7.56 | 7.28 | 7.41 | 7.50 |
|                | 250          | —        | —    | 7.41 | 7.27 | 7.21 | 7.23 | 7.53 | 7.25 | 7.41 | 7.44 |
|                | 300          | —        | —    | 7.35 | 7.25 | 7.21 | 7.26 | 7.51 | 7.27 | 7.41 | 7.41 |
|                | 400          | —        | —    | 7.29 | 7.22 | —    | 7.35 | —    | 7.31 | 7.35 | 7.34 |
|                | 500          | —        | —    | —    | 7.21 | —    | 7.43 | —    | 7.31 | 7.32 | 7.40 |
|                | 600          | —        | —    | —    | 7.19 | —    | 7.48 | —    | 7.32 | 7.32 | 7.42 |
|                | 700          | —        | —    | —    | 7.14 | —    | 7.45 | —    | 7.35 | 7.31 | 7.41 |
|                | 800          | —        | —    | —    | 7.10 | —    | 7.43 | —    | 7.39 | 7.31 | 7.37 |
|                | 900          | —        | —    | —    | —    | —    | —    | —    | —    | —    | 7.34 |
|                | Botm.        | 7.41     | 7.43 | 7.29 | —    | —    | —    | —    | —    | —    | 7.34 |

| Date                              |              | ③ August |      |      |      |      |      |      |      |      |      |
|-----------------------------------|--------------|----------|------|------|------|------|------|------|------|------|------|
| Sta. No.                          |              | 04       | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   | 13   |
| Day                               |              | 19       | 19   | 19   | 19   | 19   | 19   | 18   | 18   | 18   | 18   |
| Item                              | Time<br>Z(m) | 1240     | 1135 | 1005 | 0645 | 0305 | 0055 | 2215 | 1940 | 1620 | 1200 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —        | —    | —    | 0.10 | —    | 0.11 | —    | —    | —    | —    |
|                                   | 10           | —        | —    | —    | 0.30 | —    | 0.17 | —    | —    | —    | —    |
|                                   | 20           | —        | —    | —    | 0.45 | —    | 0.24 | —    | —    | —    | —    |
|                                   | 30           | —        | —    | —    | 0.82 | —    | 0.28 | —    | —    | —    | —    |
|                                   | 50           | —        | —    | —    | 0.89 | —    | 0.32 | —    | —    | —    | —    |
|                                   | 75           | —        | —    | —    | 0.90 | —    | 0.35 | —    | —    | —    | —    |
|                                   | 100          | —        | —    | —    | 0.93 | —    | 0.35 | —    | —    | —    | —    |
|                                   | 125          | —        | —    | —    | 0.94 | —    | 0.37 | —    | —    | —    | —    |
|                                   | 150          | —        | —    | —    | 0.95 | —    | 0.39 | —    | —    | —    | —    |
|                                   | 200          | —        | —    | —    | 1.02 | —    | 0.40 | —    | —    | —    | —    |
|                                   | 250          | —        | —    | —    | 1.06 | —    | 0.42 | —    | —    | —    | —    |
|                                   | 300          | —        | —    | —    | 1.00 | —    | 0.46 | —    | —    | —    | —    |
|                                   | 400          | —        | —    | —    | 0.85 | —    | 0.82 | —    | —    | —    | —    |
|                                   | 500          | —        | —    | —    | 0.93 | —    | 0.76 | —    | —    | —    | —    |
|                                   | 600          | —        | —    | —    | 1.23 | —    | 0.64 | —    | —    | —    | —    |
|                                   | 700          | —        | —    | —    | 1.27 | —    | 0.67 | —    | —    | —    | —    |
|                                   | 800          | —        | —    | —    | 1.31 | —    | 0.74 | —    | —    | —    | —    |
|                                   | 900          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | Bottom       | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |

| Date                          |               | ④ December |      |      |      |      |
|-------------------------------|---------------|------------|------|------|------|------|
| Sta. No.                      |               | 05         | 06   | 08   | 10   | 12   |
| Day                           |               | 8          | 8    | 10   | 10   | 10   |
| Item                          | Time<br>Z. m) | 1040       | 1200 | 0050 | 0535 | 1030 |
| O <sub>2</sub><br><br>cc<br>L | 0             | 5.18       | 5.57 | 5.55 | 5.33 | 5.61 |
|                               | 10            | 5.18       | 5.38 | 5.16 | 5.57 | 5.57 |
|                               | 20            | 5.16       | 5.26 | 5.43 | 5.38 | 5.65 |
|                               | 30            | 5.05       | 5.05 | 5.36 | 5.65 | 5.71 |
|                               | 50            | 3.44       | 5.48 | 5.26 | 5.46 | 5.73 |
|                               | 75            | 3.45       | 5.22 | 3.95 | 4.76 | 5.37 |
|                               | 100           | 6.53       | 5.50 | 5.50 | 6.15 | 5.75 |
|                               | 125           | 5.67       | 6.03 | 6.04 | 6.23 | 6.05 |
|                               | 150           | 5.86       | 5.98 | 6.06 | 6.00 | 5.97 |
|                               | 200           | —          | 5.77 | 6.06 | 6.09 | 5.38 |
|                               | 250           | —          | 5.74 | 6.02 | 5.92 | —    |
|                               | 300           | —          | 5.52 | 5.91 | 5.69 | —    |
|                               | 400           | —          | 5.55 | 5.65 | 5.45 | —    |
|                               | 500           | —          | 5.09 | 5.45 | 5.29 | —    |
|                               | 600           | —          | —    | 5.31 | 5.39 | —    |
|                               | 700           | —          | —    | 5.19 | 5.65 | —    |
|                               | 800           | —          | —    | 5.07 | 5.97 | —    |
|                               | Botm.         | —          | —    | —    | —    | —    |
| pH                            | 0             | 8.10       | 8.08 | 8.04 | 8.10 | 8.28 |
|                               | 10            | 8.10       | 8.10 | 8.06 | 8.10 | 8.25 |
|                               | 20            | 8.10       | 8.12 | 8.09 | 8.10 | 8.31 |
|                               | 30            | 8.09       | 8.10 | 8.05 | 8.13 | 8.30 |
|                               | 50            | 7.91       | 8.10 | 8.00 | 8.18 | 8.30 |
|                               | 75            | 7.92       | 8.06 | 8.00 | 8.10 | 8.22 |
|                               | 100           | 7.83       | 7.98 | 7.97 | 8.10 | 8.14 |
|                               | 125           | 7.73       | 7.92 | 7.90 | 8.09 | 8.08 |
|                               | 150           | 7.70       | 7.84 | 7.89 | 7.94 | 8.07 |
|                               | 200           | —          | 7.72 | 7.80 | 7.89 | 8.07 |
|                               | 250           | —          | 7.52 | 7.78 | 7.85 | —    |
|                               | 300           | —          | 7.48 | 7.74 | 7.83 | —    |
|                               | 400           | —          | 7.62 | 7.70 | 7.82 | —    |
|                               | 600           | —          | 7.60 | 7.69 | 7.82 | —    |
|                               | 600           | —          | —    | 7.68 | 7.81 | —    |
|                               | 700           | —          | —    | 7.68 | 7.81 | —    |
|                               | 800           | —          | —    | 7.68 | 7.81 | —    |
|                               | Botm.         | —          | —    | —    | —    | —    |

| Date                              |       | ④ December |      |      |      |      |
|-----------------------------------|-------|------------|------|------|------|------|
| Sta. No.                          |       | 05         | 06   | 08   | 10   | 12   |
| Day                               |       | 8          | 8    | 10   | 10   | 10   |
| Item                              | Time  | 1040       | 1200 | 0050 | 0535 | 1030 |
|                                   | Z(m)  |            |      |      |      |      |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0     | 0.33       | 0.60 | 1.20 | 0.28 | 0.53 |
|                                   | 10    | 0.80       | 0.45 | 0.93 | 0.38 | 0.55 |
|                                   | 20    | 0.85       | 0.60 | 0.45 | 0.45 | 0.30 |
|                                   | 30    | 0.65       | 0.50 | 0.85 | 0.53 | 0.38 |
|                                   | 50    | 0.30       | 0.59 | 0.85 | 0.59 | 0.48 |
|                                   | 75    | 0.31       | 0.70 | 1.11 | 0.61 | 1.19 |
|                                   | 100   | 0.84       | 0.60 | 1.15 | 0.97 | 0.95 |
|                                   | 125   | 1.43       | 1.51 | 1.14 | 2.09 | 0.92 |
|                                   | 150   | 1.86       | 1.56 | 1.18 | 1.45 | 0.91 |
|                                   | 200   | —          | 1.63 | 1.58 | 1.86 | 1.34 |
|                                   | 250   | —          | 1.94 | 2.17 | 1.27 | —    |
|                                   | 300   | —          | 2.23 | 2.40 | 1.20 | —    |
|                                   | 400   | —          | 2.04 | 2.83 | 2.28 | —    |
|                                   | 500   | —          | 1.60 | 2.33 | 2.21 | —    |
|                                   | 600   | —          | —    | 2.18 | 2.30 | —    |
|                                   | 700   | —          | —    | 2.00 | 2.55 | —    |
|                                   | 800   | —          | —    | 1.90 | 2.55 | —    |
|                                   | Botm. | —          | —    | —    | —    | —    |



남 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS

SOUTHERN WATERS

(Oxygen, pH and  $po_2$ -p)

1 9 6 5



# 209선 해양관측성적

Oceanographic Data, Line 209

| Date               |              | ① March |      |      | ② April |      |      |
|--------------------|--------------|---------|------|------|---------|------|------|
| Sta. No.           |              | 04      | 05   | 07   | 05      | 07   | 09   |
| Day                |              | 2       | 2    | 2    | 22      | 22   | 22   |
| Item               | Time<br>Z(m) | 0640    | 0735 | 1030 | 0600    | 0850 | 1305 |
| O <sub>2</sub>     | 0            | 5.88    | 6.02 | 5.82 | 6.11    | 6.00 | 6.11 |
|                    | 10           | 5.94    | 5.94 | 5.84 | 6.02    | 6.02 | 5.88 |
|                    | 20           | —       | —    | —    | —       | —    | —    |
|                    | 25           | 5.92    | 5.84 | 5.73 | 5.98    | 6.02 | 5.79 |
|                    | 30           | —       | —    | —    | —       | —    | —    |
|                    | 50           | 5.88    | 5.77 | 5.65 | 5.92    | 6.02 | 5.75 |
|                    | 75           | —       | —    | —    | —       | —    | —    |
|                    | 100          | —       | 5.73 | 5.61 | 5.88    | 5.79 | 5.71 |
|                    | 125          | —       | —    | —    | —       | —    | —    |
|                    | 150          | —       | —    | 5.59 | —       | 5.71 | 5.71 |
| cc/L               | 200          | —       | —    | 5.55 | —       | 5.69 | 5.58 |
|                    | Botm.        | 5.84    | 5.34 | 5.53 | 5.85    | 5.65 | 5.56 |
| pH                 | 0            | —       | —    | —    | —       | —    | —    |
|                    | 10           | —       | —    | —    | —       | —    | —    |
|                    | 20           | —       | —    | —    | —       | —    | —    |
|                    | 25           | —       | —    | —    | —       | —    | —    |
|                    | 30           | —       | —    | —    | —       | —    | —    |
|                    | 50           | —       | —    | —    | —       | —    | —    |
|                    | 75           | —       | —    | —    | —       | —    | —    |
|                    | 100          | —       | —    | —    | —       | —    | —    |
|                    | 125          | —       | —    | —    | —       | —    | —    |
|                    | 150          | —       | —    | —    | —       | —    | —    |
| PO <sub>4</sub> -P | 200          | —       | —    | —    | —       | —    | —    |
|                    | Botm.        | —       | —    | —    | —       | —    | —    |
| μg-at/L            | 0            | —       | —    | —    | —       | —    | —    |
|                    | 10           | —       | —    | —    | —       | —    | —    |
|                    | 20           | —       | —    | —    | —       | —    | —    |
|                    | 25           | —       | —    | —    | —       | —    | —    |
|                    | 30           | —       | —    | —    | —       | —    | —    |
|                    | 50           | —       | —    | —    | —       | —    | —    |
|                    | 75           | —       | —    | —    | —       | —    | —    |
|                    | 100          | —       | —    | —    | —       | —    | —    |
|                    | 125          | —       | —    | —    | —       | —    | —    |
|                    | 150          | —       | —    | —    | —       | —    | —    |
| μg-at/L            | 200          | —       | —    | —    | —       | —    | —    |
|                    | Botm.        | —       | —    | —    | —       | —    | —    |

| Date                              |              | ③ August |      |      |      |      |      |      |      |      |
|-----------------------------------|--------------|----------|------|------|------|------|------|------|------|------|
| Sta. No.                          |              | 04       | 05   | 06   | 07   | 08   | 09   | 10   | 11   | 12   |
| Day                               |              | 17       | 17   | 17   | 17   | 17   | 17   | 17   | 18   | 18   |
| Item                              | Time<br>Z(m) | 0730     | 0840 | 1050 | 1345 | 1700 | 1935 | 2155 | 0020 | 0215 |
| O <sub>2</sub><br><br>cc/L        | 0            | 5.44     | 5.31 | 5.44 | 5.27 | 5.27 | 5.25 | 5.35 | 5.31 | 5.23 |
|                                   | 10           | 5.50     | 5.33 | 5.56 | 5.12 | 5.23 | 5.37 | 5.39 | 5.27 | 5.23 |
|                                   | 20           | 5.48     | 5.50 | 5.50 | 5.12 | 5.18 | 5.35 | 5.31 | 5.23 | 5.18 |
|                                   | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 30           | 5.33     | 5.56 | 5.12 | 5.06 | 5.08 | 5.29 | 5.29 | 5.18 | 5.18 |
|                                   | 50           | —        | 5.39 | 5.11 | 4.94 | 4.70 | 5.23 | 5.21 | 5.14 | 5.02 |
|                                   | 75           | —        | 5.31 | 5.08 | 4.75 | 4.66 | 5.16 | 5.08 | 5.06 | 4.93 |
|                                   | 100          | —        | 5.21 | 4.50 | 4.64 | 4.65 | 5.02 | 4.90 | 4.93 | 4.91 |
|                                   | 125          | —        | —    | 4.99 | —    | 4.65 | —    | —    | —    | —    |
|                                   | 150          | —        | —    | 4.94 | —    | 4.65 | —    | —    | —    | —    |
|                                   | 200          | —        | —    | 4.79 | —    | 4.64 | —    | —    | —    | —    |
|                                   | Botm.        | 5.29     | 5.16 | 4.72 | 4.64 | 4.60 | 5.02 | 4.81 | 4.83 | 4.87 |
| pH                                | 0            | 7.69     | 7.70 | 7.68 | 7.71 | 7.86 | 7.48 | 7.64 | 7.60 | 7.79 |
|                                   | 10           | 7.70     | 7.62 | 7.70 | 7.69 | 7.99 | 7.73 | 7.70 | 7.60 | 7.79 |
|                                   | 20           | 7.70     | 7.68 | 7.76 | 7.89 | 7.80 | 7.76 | 7.75 | 7.51 | 7.80 |
|                                   | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 30           | 7.70     | 7.68 | 7.76 | 7.89 | 7.72 | 7.76 | 7.67 | 7.88 | 7.68 |
|                                   | 50           | —        | 7.69 | 7.85 | 7.89 | 7.69 | 7.85 | 7.67 | 7.94 | 7.68 |
|                                   | 75           | —        | 7.68 | 7.80 | 7.87 | 7.57 | 7.80 | 7.70 | 7.82 | 7.65 |
|                                   | 100          | —        | 7.66 | 7.80 | 7.81 | 7.54 | 7.80 | 7.78 | 7.72 | 7.80 |
|                                   | 125          | —        | —    | 7.80 | —    | 7.52 | —    | —    | —    | —    |
|                                   | 150          | —        | —    | 7.78 | —    | 7.52 | —    | —    | —    | —    |
|                                   | 200          | —        | —    | 7.70 | —    | 7.51 | —    | —    | —    | —    |
|                                   | Botm.        | 7.66     | 7.68 | 7.69 | 7.80 | 7.51 | 7.70 | 7.71 | 7.74 | 7.78 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —        | —    | —    | 0.08 | —    | 0.13 | —    | —    | —    |
|                                   | 10           | —        | —    | —    | 0.16 | —    | 0.16 | —    | —    | —    |
|                                   | 20           | —        | —    | —    | 0.17 | —    | 0.22 | —    | —    | —    |
|                                   | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 30           | —        | —    | —    | 0.22 | —    | 0.32 | —    | —    | —    |
|                                   | 50           | —        | —    | —    | 0.37 | —    | 0.32 | —    | —    | —    |
|                                   | 75           | —        | —    | —    | 0.44 | —    | 0.38 | —    | —    | —    |
|                                   | 100          | —        | —    | —    | 0.48 | —    | 0.43 | —    | —    | —    |
|                                   | 125          | —        | —    | —    | —    | —    | 0.44 | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | Botm.        | —        | —    | —    | 0.49 | —    | —    | —    | —    | —    |

# 208선 해양관측성적

Oceanographic Data, Line 208

| Date                              |              | ① March |      |      |      | ② April |      |      |
|-----------------------------------|--------------|---------|------|------|------|---------|------|------|
| Sta. No.                          |              | 01      | 02   | 04   | 06   | 02      | 04   | 06   |
| Day                               |              | 3       | 3    | 3    | 2    | 22      | 22   | 22   |
| Item                              | Time<br>Z(m) | 1350    | 1230 | 0930 | 2035 | 2355    | 2100 | 1810 |
| O <sub>2</sub><br><br>cc/L        | 0            | 6.00    | 5.92 | 5.94 | 5.71 | 5.81    | 5.85 | 5.98 |
|                                   | 10           | 5.84    | 5.84 | 5.86 | 5.73 | 5.77    | 5.85 | 5.96 |
|                                   | 20           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 25           | 5.82    | 5.71 | 5.77 | 5.67 | 5.65    | 5.77 | 5.90 |
|                                   | 30           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 50           | 5.80    | 5.65 | 5.73 | 5.63 | 5.65    | 5.75 | 5.88 |
|                                   | 75           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —       | —    | 5.71 | 5.49 | —       | 5.96 | 5.75 |
|                                   | 125          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —       | —    | —    | —    | —       | —    | —    |
| pH                                | 200          | —       | —    | —    | —    | —       | —    | —    |
|                                   | Botm.        | 5.75    | 5.53 | 5.67 | 5.57 | 5.60    | 5.62 | 5.69 |
|                                   | 0            | —       | —    | —    | —    | —       | —    | —    |
|                                   | 10           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 20           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 25           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 30           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 75           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —       | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 125          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —       | —    | —    | —    | —       | —    | —    |
|                                   | Botm.        | —       | —    | —    | —    | —       | —    | —    |
|                                   | 0            | —       | —    | —    | —    | —       | —    | —    |
|                                   | 10           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 20           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 25           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 30           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 75           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 125          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —       | —    | —    | —    | —       | —    | —    |
|                                   | Botm.        | —       | —    | —    | —    | —       | —    | —    |

| Date                              |       | (3) May |      |      |      |      |      |
|-----------------------------------|-------|---------|------|------|------|------|------|
| Sta. No.                          |       | 01      | 02   | 03   | 04   | 05   | 06   |
| Day                               |       | 7       | 7    | 7    | 7    | 7    | 7    |
| Item                              | Time  | 0620    | 0700 | 0845 | 1010 | 1145 | 1338 |
|                                   | Z(m)  |         |      |      |      |      |      |
| O <sub>2</sub><br><br>cc<br>/ L   | 0     | 5.23    | 5.54 | 5.52 | 5.58 | 5.63 | 5.72 |
|                                   | 10    | 5.45    | 5.63 | 5.50 | 5.50 | 5.39 | 5.69 |
|                                   | 20    | —       | —    | —    | —    | —    | —    |
|                                   | 25    | 5.45    | 5.52 | 5.50 | 5.45 | 5.50 | 5.50 |
|                                   | 30    | —       | —    | —    | —    | —    | —    |
|                                   | 50    | 5.45    | 5.50 | 5.41 | 5.50 | 5.30 | 5.50 |
|                                   | 75    | —       | —    | —    | —    | —    | —    |
|                                   | 100   | —       | 5.50 | 5.39 | 5.50 | 5.28 | 5.43 |
|                                   | 125   | —       | —    | —    | —    | —    | —    |
|                                   | 150   | —       | —    | —    | —    | —    | —    |
|                                   | 200   | —       | —    | —    | —    | —    | —    |
|                                   | Botm. | 5.23    | 5.50 | 5.39 | 5.47 | 5.28 | 5.41 |
| pH                                | 0     | —       | —    | —    | —    | —    | —    |
|                                   | 10    | —       | —    | —    | —    | —    | —    |
|                                   | 20    | —       | —    | —    | —    | —    | —    |
|                                   | 25    | —       | —    | —    | —    | —    | —    |
|                                   | 30    | —       | —    | —    | —    | —    | —    |
|                                   | 50    | —       | —    | —    | —    | —    | —    |
|                                   | 75    | —       | —    | —    | —    | —    | —    |
|                                   | 100   | —       | —    | —    | —    | —    | —    |
|                                   | 125   | —       | —    | —    | —    | —    | —    |
|                                   | 150   | —       | —    | —    | —    | —    | —    |
|                                   | 200   | —       | —    | —    | —    | —    | —    |
|                                   | Botm. | —       | —    | —    | —    | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0     | —       | —    | —    | —    | —    | —    |
|                                   | 10    | —       | —    | —    | —    | —    | —    |
|                                   | 20    | —       | —    | —    | —    | —    | —    |
|                                   | 25    | —       | —    | —    | —    | —    | —    |
|                                   | 30    | —       | —    | —    | —    | —    | —    |
|                                   | 50    | —       | —    | —    | —    | —    | —    |
|                                   | 75    | —       | —    | —    | —    | —    | —    |
|                                   | 100   | —       | —    | —    | —    | —    | —    |
|                                   | 125   | —       | —    | —    | —    | —    | —    |
|                                   | 150   | —       | —    | —    | —    | —    | —    |
|                                   | 200   | —       | —    | —    | —    | —    | —    |
|                                   | Botm. | —       | —    | —    | —    | —    | —    |





| Date               |       | ⑤ August |      |      |      |      |      |      |      |      |      |
|--------------------|-------|----------|------|------|------|------|------|------|------|------|------|
| Sta. No.           |       | 01       | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 10   |
| Day                |       | 16       | 16   | 15   | 15   | 15   | 15   | 15   | 15   | 15   | 15   |
| Time               |       |          |      |      |      |      |      |      |      |      |      |
| Item               | Z(m)  | 0150     | 0037 | 2300 | 2105 | 1915 | 1702 | 1510 | 1310 | 1120 | 0925 |
| O <sub>2</sub>     | 0     | 5.35     | 5.48 | 5.44 | 5.44 | 5.39 | 5.25 | 5.27 | 5.25 | 5.53 | 5.80 |
|                    | 10    | 5.39     | 5.56 | 5.37 | 5.39 | 5.44 | 5.39 | 5.44 | 5.08 | 5.50 | 5.75 |
|                    | 20    | 5.44     | 5.60 | 5.32 | 5.35 | 5.56 | 5.39 | 5.39 | 5.02 | 5.44 | 5.54 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 30    | 5.44     | 5.62 | 5.29 | 5.29 | 5.33 | 5.41 | 5.35 | 5.00 | 5.29 | 5.64 |
|                    | 50    | 5.31     | 5.08 | 5.27 | 4.99 | 5.33 | 5.31 | 5.27 | 5.00 | 5.25 | 5.60 |
|                    | 75    | —        | 5.02 | 5.25 | 4.92 | 5.10 | 4.95 | 5.16 | 4.98 | 5.02 | 5.58 |
|                    | 100   | —        | —    | 5.16 | 4.91 | 4.92 | 4.89 | 5.02 | 4.93 | 4.80 | 5.56 |
|                    | 125   | —        | —    | —    | 4.91 | —    | —    | —    | —    | —    | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 200   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm. | 5.21     | 4.97 | 5.10 | 4.91 | 4.91 | 4.89 | 4.98 | 4.91 | 4.62 | 5.54 |
| pH                 | 0     | 7.63     | 7.63 | 7.90 | 7.38 | 7.59 | 7.80 | 7.30 | 7.42 | 7.88 | 7.76 |
|                    | 10    | 7.74     | 7.77 | 7.94 | 7.38 | 7.54 | 7.86 | 7.21 | 7.40 | 7.86 | 7.71 |
|                    | 20    | 7.80     | 7.85 | 7.96 | 7.35 | 7.50 | 7.38 | 7.29 | 7.56 | 7.82 | 7.75 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 30    | 7.70     | 7.84 | 7.94 | 7.32 | 7.42 | 7.33 | 7.30 | 7.45 | 7.80 | 7.89 |
|                    | 50    | 7.69     | 7.84 | 7.98 | 7.37 | 7.54 | 7.22 | 7.28 | 7.38 | 7.79 | 7.82 |
|                    | 75    | —        | 7.74 | 7.80 | 7.41 | 7.48 | 7.16 | 3.38 | 7.46 | 7.72 | 7.78 |
|                    | 100   | —        | —    | 7.69 | 7.50 | 7.43 | 7.45 | 7.38 | 7.41 | 7.54 | 7.80 |
|                    | 125   | —        | —    | —    | 7.45 | —    | —    | —    | —    | —    | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 200   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm. | 7.69     | 7.73 | 7.61 | 7.41 | 7.41 | 7.47 | 7.28 | 7.32 | 7.50 | 7.88 |
| PO <sub>4</sub> -P | 0     | —        | —    | 0.11 | —    | 0.22 | —    | 0.09 | —    | —    | —    |
|                    | 10    | —        | —    | 0.19 | —    | 0.27 | —    | 0.14 | —    | —    | —    |
|                    | 20    | —        | —    | 0.30 | —    | 0.30 | —    | 0.21 | —    | —    | —    |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 30    | —        | —    | 0.33 | —    | 0.32 | —    | 0.43 | —    | —    | —    |
|                    | 50    | —        | —    | 0.43 | —    | 0.37 | —    | 0.63 | —    | —    | —    |
|                    | 75    | —        | —    | 0.47 | —    | 0.42 | —    | 0.76 | —    | —    | —    |
|                    | 100   | —        | —    | 0.52 | —    | 0.57 | —    | 0.84 | —    | —    | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | 200   | —        | —    | —    | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm. | —        | —    | 0.54 | —    | 0.59 | —    | 0.51 | —    | —    | —    |



| Date                                         |              | ⑦ October |      |      |      |      |      |      |
|----------------------------------------------|--------------|-----------|------|------|------|------|------|------|
| Sta. No.                                     |              | 01        | 02   | 03   | 04   | 05   | 06   | 07   |
| Day                                          |              | 7         | 7    | 7    | 7    | 7    | 7    | 7    |
| Item                                         | Time<br>Z(m) | 0640      | 0817 | 0950 | 1155 | 1345 | 1520 | 1810 |
| O <sub>2</sub><br><br>CC<br>L                | 0            | 6.61      | 6.26 | 6.55 | 6.18 | 6.00 | 6.10 | 5.84 |
|                                              | 10           | 6.24      | 5.74 | 5.94 | 6.36 | 6.74 | 6.13 | 5.78 |
|                                              | 20           | 6.08      | 5.88 | 6.49 | 6.00 | 6.19 | 5.90 | 5.70 |
|                                              | 25           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 30           | 6.08      | 5.68 | 6.49 | 5.98 | 6.59 | 5.88 | 5.68 |
|                                              | 50           | —         | 5.41 | 5.35 | 5.45 | 6.55 | 5.88 | 5.05 |
|                                              | 75           | —         | 5.19 | 5.21 | 5.09 | 5.05 | 5.88 | 5.03 |
|                                              | 100          | —         | 5.17 | 4.56 | 5.01 | 4.99 | 4.95 | —    |
|                                              | 125          | —         | —    | 4.54 | 4.14 | 4.97 | —    | —    |
|                                              | 150          | —         | —    | —    | 4.05 | 4.89 | —    | —    |
|                                              | 200          | —         | —    | —    | —    | —    | —    | —    |
|                                              | Botm.        | 6.08      | 4.67 | 4.38 | —    | 4.87 | 3.97 | 4.05 |
| pH                                           | 0            | 7.99      | 7.81 | 8.09 | 7.86 | 8.13 | 8.04 | 8.09 |
|                                              | 10           | 8.04      | 7.98 | 8.13 | 7.97 | 8.13 | 8.09 | 8.07 |
|                                              | 20           | 8.16      | 8.00 | 8.14 | 8.03 | 8.14 | 8.10 | 8.16 |
|                                              | 25           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 30           | 7.98      | 8.17 | 8.14 | 8.01 | 8.17 | 8.07 | 8.00 |
|                                              | 50           | —         | 7.87 | 7.88 | 7.90 | 7.88 | 8.02 | 8.02 |
|                                              | 75           | —         | 7.87 | 7.72 | 7.98 | 7.41 | 7.89 | 7.89 |
|                                              | 100          | —         | 7.85 | 7.72 | 7.98 | 7.58 | 7.64 | —    |
|                                              | 125          | —         | —    | 7.62 | 7.91 | 7.68 | —    | —    |
|                                              | 150          | —         | —    | —    | 7.89 | 7.55 | —    | —    |
|                                              | 200          | —         | —    | —    | —    | —    | —    | —    |
|                                              | Botm.        | 7.87      | 7.74 | 7.56 | —    | 7.54 | 7.51 | 7.76 |
| PO <sub>4</sub> -P<br><br>$\mu\text{g-at/L}$ | 0            | —         | —    | —    | —    | —    | —    | —    |
|                                              | 10           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 20           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 25           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 30           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 50           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 75           | —         | —    | —    | —    | —    | —    | —    |
|                                              | 100          | —         | —    | —    | —    | —    | —    | —    |
|                                              | 125          | —         | —    | —    | —    | —    | —    | —    |
|                                              | 150          | —         | —    | —    | —    | —    | —    | —    |
|                                              | 200          | —         | —    | —    | —    | —    | —    | —    |
|                                              | Botm.        | —         | —    | —    | —    | —    | —    | —    |



| Date                              |              | 9) December |      |      |      |      |      |
|-----------------------------------|--------------|-------------|------|------|------|------|------|
| Sta. No.                          |              | 02          | 03   | 04   | 06   | 08   | 10   |
| Day                               |              | 11          | 11   | 11   | 11   | 11   | 11   |
| Item                              | Time<br>Z(m) | 2320        | 2125 | 1950 | 1625 | 1325 | 1025 |
| O <sub>2</sub><br><br>cc/L        | 0            | 5.09        | 4.97 | 5.13 | 5.01 | 5.03 | 5.92 |
|                                   | 10           | 5.03        | 5.03 | 4.95 | 5.03 | 4.95 | 4.91 |
|                                   | 20           | 5.03        | 4.95 | 4.97 | 5.05 | 5.05 | 4.87 |
|                                   | 25           | —           | —    | —    | —    | —    | —    |
|                                   | 30           | 5.01        | 4.88 | 4.95 | 5.05 | 6.00 | 4.85 |
|                                   | 50           | 4.92        | 4.92 | 4.93 | 4.95 | 4.95 | 4.76 |
|                                   | 75           | 4.85        | 4.82 | 4.93 | 4.76 | 4.95 | 4.74 |
|                                   | 100          | 4.83        | 4.93 | 4.92 | 4.45 | 3.86 | 4.74 |
|                                   | 125          | —           | —    | 4.40 | —    | —    | —    |
|                                   | 150          | —           | —    | —    | —    | —    | —    |
|                                   | 200          | —           | —    | —    | —    | —    | —    |
|                                   | Botm.        | 4.29        | 4.43 | 3.61 | 3.74 | 4.85 | 4.74 |
| pH                                | 0            | 8.19        | 8.21 | 8.14 | 8.29 | 8.24 | 8.22 |
|                                   | 10           | 8.19        | 8.23 | 8.25 | 8.29 | 8.25 | 8.23 |
|                                   | 20           | 8.23        | 8.24 | 8.22 | 8.25 | 8.23 | 8.26 |
|                                   | 25           | —           | —    | —    | —    | —    | —    |
|                                   | 30           | 8.25        | 8.25 | 8.21 | 8.24 | 8.18 | 8.29 |
|                                   | 50           | 8.29        | 8.14 | 8.13 | 8.22 | 8.22 | 8.29 |
|                                   | 75           | 8.24        | 8.21 | 8.29 | 8.20 | 8.19 | 8.30 |
|                                   | 100          | 8.22        | 8.20 | 8.30 | 8.17 | 8.18 | 8.29 |
|                                   | 125          | —           | —    | 8.30 | —    | —    | —    |
|                                   | 150          | —           | —    | —    | —    | —    | —    |
|                                   | 200          | —           | —    | —    | —    | —    | —    |
|                                   | Botm.        | 8.20        | 8.21 | 8.19 | 8.12 | 8.18 | 8.28 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | 0.80        | 1.10 | 1.05 | 0.48 | 0.68 | 0.88 |
|                                   | 10           | 0.73        | 0.78 | 0.65 | 0.68 | 0.88 | 0.53 |
|                                   | 20           | 0.65        | 0.55 | 0.53 | 0.63 | 0.90 | 0.50 |
|                                   | 25           | —           | —    | —    | —    | —    | —    |
|                                   | 30           | 0.63        | 0.63 | 0.70 | 0.45 | 0.68 | 0.68 |
|                                   | 50           | 0.58        | 0.60 | 0.70 | 0.53 | 0.63 | 0.45 |
|                                   | 75           | 0.83        | 0.55 | 1.30 | 0.70 | 1.00 | 0.40 |
|                                   | 100          | 0.83        | 0.48 | 0.83 | 0.81 | 0.55 | 0.58 |
|                                   | 125          | —           | —    | 0.90 | —    | —    | —    |
|                                   | 150          | —           | —    | —    | —    | —    | —    |
|                                   | 200          | —           | —    | —    | —    | —    | —    |
|                                   | Botm.        | 0.88        | 0.70 | 1.40 | —    | 0.58 | 0.70 |

# 207 선 해양 관측 성적

Oceanographic Data, Line 207

| Date                              |              | ① January |      |      |      | ② March |      |      |
|-----------------------------------|--------------|-----------|------|------|------|---------|------|------|
| Sta. No.                          |              | 01        | 02   | 03   | 04   | 01      | 02   | 04   |
| Day                               |              | 14        | 14   | 14   | 17   | 5       | 5    | 5    |
| Item                              | Time<br>Z(m) | 1128      | 1235 | 1320 | 1925 | 2105    | 2010 | 1825 |
| O <sub>2</sub><br>cc<br>/ L       | 0            | 5.56      | 5.76 | 5.65 | 5.54 | 5.94    | 6.06 | 6.06 |
|                                   | 10           | 5.65      | 5.65 | 5.45 | 5.51 | 5.94    | 6.04 | 6.03 |
|                                   | 20           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 25           | 5.65      | 5.65 | 5.31 | 5.20 | 5.90    | 5.96 | 6.02 |
|                                   | 30           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —         | 5.74 | 5.58 | 5.43 | 5.88    | 5.92 | 6.00 |
|                                   | 75           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —         | —    | —    | 5.54 | —       | —    | 5.88 |
|                                   | 125          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —         | —    | —    | 5.62 | —       | —    | 5.84 |
|                                   | 200          | —         | —    | —    | 5.29 | —       | —    | 5.84 |
| Botm.                             |              | 5.74      | 5.69 | 5.82 | 6.27 | 5.84    | 5.88 | 5.82 |
| pH                                | 0            | —         | —    | —    | —    | —       | —    | —    |
|                                   | 10           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 20           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 25           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 30           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 75           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 125          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —         | —    | —    | —    | —       | —    | —    |
| Botm.                             |              | —         | —    | —    | —    | —       | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —         | —    | —    | —    | —       | —    | —    |
|                                   | 10           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 20           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 25           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 30           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 75           | —         | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 125          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —         | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —         | —    | —    | —    | —       | —    | —    |
| Botm.                             |              | —         | —    | —    | —    | —       | —    | —    |

[illegible]



| ⑤ August |      |      |      |      |      |      |      |      |      |      |      |
|----------|------|------|------|------|------|------|------|------|------|------|------|
| 01       | 02   | 03   | 04   | 05   | 07   | 08   | 09   | 10   | 11   | 12   | 13   |
| 14       | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 15   | 15   | 15   | 15   |
| 0935     | 1045 | 1150 | 1250 | 1540 | 1810 | 2015 | 2210 | 0015 | 0200 | 0340 | 0515 |
| 6.68     | 4.87 | 5.27 | 5.12 | 4.94 | 5.66 | 5.54 | 5.44 | 5.39 | 5.81 | 5.54 | 5.70 |
| 5.48     | 5.16 | 5.64 | 5.00 | 4.95 | 5.35 | 5.69 | 5.75 | 5.69 | 5.90 | 5.84 | 5.37 |
| 5.08     | 5.14 | 5.68 | 5.73 | 5.18 | 5.23 | 5.57 | 5.75 | 5.85 | 5.96 | 5.97 | 5.28 |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 5.24     | 5.06 | 5.67 | 5.64 | 5.21 | 5.18 | 5.52 | 5.77 | 5.10 | 5.70 | 5.62 | 5.02 |
| 4.75     | 4.49 | 5.09 | 5.29 | 5.21 | 5.16 | 5.46 | 5.12 | 4.72 | 5.63 | 5.44 | 4.97 |
| —        | 4.49 | 4.87 | 4.60 | 4.70 | 4.70 | 4.44 | 4.93 | 4.52 | 5.17 | 5.37 | —    |
| —        | —    | 4.36 | 4.56 | 4.42 | —    | —    | 4.84 | 4.10 | 5.19 | —    | —    |
| —        | —    | —    | 4.54 | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | —    | 4.52 | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 4.77     | 4.47 | 4.83 | 4.39 | 4.37 | 4.68 | 4.71 | 4.83 | 4.10 | 5.12 | 4.81 | 4.60 |
| 7.86     | 7.87 | 8.02 | 8.06 | 7.98 | 7.89 | 7.50 | 7.89 | 7.86 | 7.59 | 7.55 | 7.81 |
| 7.85     | 7.93 | 7.79 | 7.95 | 7.96 | 7.98 | 7.48 | 7.86 | 7.86 | 7.65 | 7.60 | 7.81 |
| 7.72     | 7.95 | 7.45 | 7.92 | 7.90 | 7.88 | 7.45 | 7.88 | 7.82 | 7.60 | 7.60 | 7.92 |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 7.89     | 7.94 | 8.04 | 7.84 | 7.77 | 7.79 | 7.49 | 7.75 | 7.82 | 7.56 | 7.58 | 7.90 |
| 7.87     | 7.93 | 7.87 | 7.76 | 7.65 | 7.81 | 7.52 | 7.65 | 7.61 | 7.25 | 7.61 | 7.82 |
| —        | 7.69 | 7.87 | 7.71 | 7.67 | 7.75 | 7.52 | 7.55 | 7.61 | 7.70 | 7.71 | —    |
| —        | —    | 7.77 | 7.70 | 7.66 | —    | —    | 7.70 | 7.60 | 7.59 | —    | —    |
| —        | —    | —    | 7.68 | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | —    | 7.67 | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 7.64     | 7.61 | 7.79 | 7.66 | 7.75 | 7.56 | 7.59 | 7.65 | 7.60 | 7.58 | 7.89 | 7.81 |
| —        | —    | 0.27 | —    | 0.08 | 0.11 | —    | 0.10 | —    | —    | —    | —    |
| —        | —    | 0.32 | —    | 0.27 | 0.24 | —    | 0.16 | —    | —    | —    | —    |
| —        | —    | 0.74 | —    | 0.35 | 0.44 | —    | 0.38 | —    | —    | —    | —    |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | 0.76 | —    | 0.40 | 0.62 | —    | 0.46 | —    | —    | —    | —    |
| —        | —    | 0.76 | —    | 0.75 | 0.68 | —    | 0.54 | —    | —    | —    | —    |
| —        | —    | 0.66 | —    | 0.85 | 0.71 | —    | 0.63 | —    | —    | —    | —    |
| —        | —    | 0.73 | —    | 0.87 | —    | —    | 1.14 | —    | —    | —    | —    |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| —        | —    | 0.70 | —    | 0.87 | 0.73 | —    | 1.20 | —    | —    | —    | —    |

| Date                               |       | ⑥ September |      |      |      |      |
|------------------------------------|-------|-------------|------|------|------|------|
| Sta. No.                           |       | 01          | 02   | 03   | 04   | 05   |
| Day                                |       | 22          | 22   | 22   | 22   | 22   |
| Item                               | Time  | 1045        | 1235 | 1335 | 1500 | 1600 |
|                                    | Z(m)  |             |      |      |      |      |
| O <sub>2</sub><br><br>cc<br>—<br>L | 0     | 5.09        | 5.27 | 5.17 | 5.07 | 5.13 |
|                                    | 10    | 5.17        | 5.17 | 4.99 | 5.05 | 5.14 |
|                                    | 20    | 5.01        | 5.17 | 4.86 | 4.76 | 5.20 |
|                                    | 25    | —           | —    | —    | —    | —    |
|                                    | 30    | 4.99        | 5.25 | 5.11 | 4.76 | 5.03 |
|                                    | 50    | 4.92        | 4.99 | 5.33 | 4.73 | 4.99 |
|                                    | 75    | 4.50        | 4.94 | 4.99 | 4.66 | 4.66 |
|                                    | 100   | —           | —    | 4.79 | 4.66 | 4.62 |
|                                    | 125   | —           | —    | —    | —    | —    |
|                                    | 150   | —           | —    | —    | 4.53 | 4.59 |
|                                    | 200   | —           | —    | —    | 4.48 | —    |
|                                    | Botm. | —           | 4.66 | 4.68 | 4.47 | —    |
| pH                                 | 0     | 7.95        | 7.99 | 8.29 | 8.27 | 8.29 |
|                                    | 10    | 8.21        | 8.05 | 8.20 | 8.31 | 8.31 |
|                                    | 20    | 8.20        | 8.02 | 8.22 | 8.36 | 8.34 |
|                                    | 25    | —           | —    | —    | —    | —    |
|                                    | 30    | 8.14        | 8.02 | 8.09 | 8.23 | 8.32 |
|                                    | 50    | 8.02        | 8.02 | 8.18 | 8.28 | 8.35 |
|                                    | 75    | 8.01        | 8.29 | 8.17 | 8.26 | 8.27 |
|                                    | 100   | —           | —    | 8.13 | 8.11 | 8.22 |
|                                    | 125   | —           | —    | —    | —    | —    |
|                                    | 150   | —           | —    | —    | 8.06 | 8.16 |
|                                    | 200   | —           | —    | —    | 8.33 | 8.18 |
|                                    | Botm. | —           | 8.26 | 8.10 | 8.19 | 8.17 |
| PO <sub>4</sub> -P<br><br>μg-at/L  | 0     | —           | —    | —    | —    | —    |
|                                    | 10    | —           | —    | —    | —    | —    |
|                                    | 20    | —           | —    | —    | —    | —    |
|                                    | 25    | —           | —    | —    | —    | —    |
|                                    | 30    | —           | —    | —    | —    | —    |
|                                    | 50    | —           | —    | —    | —    | —    |
|                                    | 75    | —           | —    | —    | —    | —    |
|                                    | 100   | —           | —    | —    | —    | —    |
|                                    | 125   | —           | —    | —    | —    | —    |
|                                    | 150   | —           | —    | —    | —    | —    |
|                                    | 200   | —           | —    | —    | —    | —    |
|                                    | Botm. | —           | —    | —    | —    | —    |



| Date                              |              | ⑨ December |      |      |      |      |      |      |      |      |
|-----------------------------------|--------------|------------|------|------|------|------|------|------|------|------|
| Sta. No.                          |              | 01         | 02   | 03   | 04   | 05   | 07   | 08   | 10   | 12   |
| Day                               |              | 21         | 21   | 21   | 21   | 21   | 21   | 21   | 21   | 20   |
| Item                              | Time<br>Z(m) | 1310       | 1200 | 1110 | 0955 | 0845 | 0645 | 0450 | 0145 | 2225 |
| O <sub>2</sub><br><br>cc<br>L     | 0            | 4.56       | 5.26 | 4.97 | 5.07 | 5.05 | 5.26 | 5.09 | 5.07 | 5.16 |
|                                   | 10           | 4.74       | 5.98 | 4.95 | 5.07 | 5.05 | 5.98 | 5.11 | 5.05 | 5.18 |
|                                   | 20           | 4.74       | 5.07 | 4.95 | 5.07 | 4.99 | 5.13 | 5.32 | 4.95 | 5.26 |
|                                   | 25           | —          | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 30           | 4.76       | 5.05 | 5.05 | 5.05 | 4.97 | 5.13 | 5.07 | 4.95 | 5.26 |
|                                   | 50           | 5.07       | 4.80 | 5.01 | 4.93 | 4.97 | 5.16 | 5.13 | 4.95 | 4.76 |
|                                   | 75           | —          | 5.52 | 4.95 | 4.99 | 4.95 | 5.16 | 5.22 | 4.93 | 5.13 |
|                                   | 100          | —          | —    | 4.45 | 4.99 | 4.95 | —    | —    | —    | —    |
|                                   | 125          | —          | —    | —    | 4.95 | 4.78 | —    | —    | —    | —    |
|                                   | 150          | —          | —    | —    | 4.74 | —    | —    | —    | —    | —    |
|                                   | 200          | —          | —    | —    | 4.85 | —    | —    | —    | —    | —    |
|                                   | Botm.        | 5.07       | 4.25 | —    | 4.95 | 4.74 | 5.16 | 5.16 | 4.93 | 5.09 |
| pH                                | 0            | 8.22       | 8.23 | 8.30 | 8.25 | 8.28 | 8.26 | 8.28 | 8.26 | 8.30 |
|                                   | 10           | 8.19       | 8.23 | 8.28 | 8.28 | 8.28 | 8.27 | 8.28 | 8.28 | 8.29 |
|                                   | 20           | 8.20       | 8.29 | 8.28 | 8.35 | 8.33 | 8.29 | 8.28 | 8.30 | 8.29 |
|                                   | 25           | —          | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 30           | 8.21       | 8.24 | 8.23 | 8.38 | 8.38 | 8.30 | 8.30 | 8.29 | 8.25 |
|                                   | 50           | 8.22       | 8.22 | 8.14 | 8.39 | 8.35 | 8.30 | 8.28 | 8.30 | 8.28 |
|                                   | 75           | —          | 8.22 | 8.09 | 8.30 | 8.35 | 8.30 | 8.26 | 8.32 | 8.26 |
|                                   | 100          | —          | —    | 8.00 | 8.30 | 8.35 | —    | —    | —    | —    |
|                                   | 125          | —          | —    | —    | 8.28 | 8.24 | —    | —    | —    | —    |
|                                   | 150          | —          | —    | —    | 8.10 | —    | —    | —    | —    | —    |
|                                   | 200          | —          | —    | —    | 8.00 | —    | —    | —    | —    | —    |
|                                   | Botm.        | 8.20       | 8.07 | —    | 8.00 | 8.17 | 8.30 | 8.25 | 8.29 | 8.30 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | 0.30       | 0.38 | 0.23 | 0.28 | 0.25 | 0.40 | 0.53 | 0.38 | 0.38 |
|                                   | 10           | 0.35       | 0.30 | 0.38 | 0.23 | 0.35 | 0.45 | 0.45 | 0.33 | 0.40 |
|                                   | 20           | 0.33       | 0.33 | 0.50 | 0.42 | 0.38 | 0.53 | 0.68 | 0.40 | 0.48 |
|                                   | 25           | —          | —    | —    | —    | —    | —    | —    | —    | —    |
|                                   | 30           | 0.45       | 0.43 | 0.55 | 0.55 | 0.30 | 0.58 | 0.68 | 0.35 | 0.53 |
|                                   | 50           | 0.60       | 0.60 | 0.63 | 0.58 | 0.58 | 0.60 | 0.70 | 0.33 | 0.58 |
|                                   | 75           | —          | 0.78 | 0.68 | 0.65 | 0.70 | 0.63 | 0.58 | 0.73 | 0.58 |
|                                   | 100          | —          | —    | 0.65 | 0.66 | 0.74 | —    | —    | —    | —    |
|                                   | 125          | —          | —    | —    | 0.74 | 0.78 | —    | —    | —    | —    |
|                                   | 150          | —          | —    | —    | 0.80 | —    | —    | —    | —    | —    |
|                                   | 200          | —          | —    | —    | 0.78 | —    | —    | —    | —    | —    |
|                                   | Botm.        | 0.65       | 0.78 | —    | 0.78 | 0.75 | 0.63 | 0.53 | 0.75 | 0.58 |

## 206선 해양관측성적

Oceanographic Data, Line 206

| Date                              |              | ① March |      |      | ② May |      |      |      |
|-----------------------------------|--------------|---------|------|------|-------|------|------|------|
| Sta. No.                          |              | 01      | 02   | 03   | 01    | 02   | 03   | 04   |
| Day                               |              | 14      | 14   | 14   | 5     | 5    | 5    | 5    |
| Item                              | Time<br>Z(m) | 0730    | 0620 | 0440 | 0435  | 0550 | 0707 | 0835 |
| O <sub>2</sub><br><br>cc<br>/ L   | 0            | 6.38    | 6.38 | 6.02 | 5.75  | 5.85 | 5.42 | 5.62 |
|                                   | 10           | 6.42    | 6.40 | 6.02 | 5.73  | 5.83 | 5.42 | 5.62 |
|                                   | 20           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 25           | 6.30    | 6.38 | 6.06 | 5.73  | 5.56 | 5.42 | 5.60 |
|                                   | 30           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 50           | 6.28    | 6.36 | 6.19 | 6.71  | 5.56 | 5.39 | 5.56 |
|                                   | 75           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 100          | —       | —    | —    | —     | —    | —    | 5.56 |
|                                   | 125          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 150          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 200          | —       | —    | —    | —     | —    | —    | —    |
|                                   | Botm.        | 6.26    | 6.36 | 6.23 | 5.69  | 5.54 | 5.35 | 5.54 |
| pH                                | 0            | —       | —    | —    | —     | —    | —    | —    |
|                                   | 10           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 20           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 25           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 30           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 50           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 75           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 100          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 125          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 150          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 200          | —       | —    | —    | —     | —    | —    | —    |
|                                   | Botm.        | —       | —    | —    | —     | —    | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —       | —    | —    | —     | —    | —    | —    |
|                                   | 10           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 20           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 25           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 30           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 50           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 75           | —       | —    | —    | —     | —    | —    | —    |
|                                   | 100          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 125          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 150          | —       | —    | —    | —     | —    | —    | —    |
|                                   | 200          | —       | —    | —    | —     | —    | —    | —    |
|                                   | Botm.        | —       | —    | —    | —     | —    | —    | —    |

| Date                              |              | ③ June |      |      | ① August |      |      |      |      |
|-----------------------------------|--------------|--------|------|------|----------|------|------|------|------|
| Sta. No.                          |              | 01     | 02   | 03   | 01       | 02   | 03   | 04   | 05   |
| Day                               |              | 12     | 12   | 12   | 14       | 14   | 14   | 14   | 14   |
| Item                              | Time<br>Z(m) | 0716   | 0555 | 0409 | 0713     | 0850 | 1035 | 1205 | 1412 |
| O <sub>2</sub>                    | 0            | 5.72   | 5.63 | 5.72 | 8.23     | 6.19 | 5.83 | 5.85 | 5.89 |
|                                   | 10           | 5.74   | 5.58 | 5.69 | 6.82     | 6.00 | 6.69 | 6.14 | 5.55 |
|                                   | 20           | 5.67   | 5.54 | 5.69 | 8.53     | 6.65 | 6.41 | 6.52 | 8.34 |
|                                   | 25           | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 30           | 5.54   | 5.50 | 5.52 | 9.29     | 6.46 | 7.00 | 7.22 | 6.39 |
|                                   | 50           | 5.45   | 5.43 | 5.39 | —        | 5.46 | 5.53 | 5.07 | 6.74 |
|                                   | 75           | —      | —    | 5.14 | —        | 5.77 | 4.53 | 5.27 | 4.91 |
|                                   | 100          | —      | —    | —    | —        | —    | 4.72 | 4.80 | 5.22 |
|                                   | 125          | —      | —    | —    | —        | —    | —    | 5.46 | —    |
|                                   | 150          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 200          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | Botm.        | 5.36   | 5.17 | 5.08 | —        | —    | —    | —    | —    |
| pH                                | 0            | —      | —    | —    | 7.48     | 7.74 | 7.70 | 8.01 | 8.08 |
|                                   | 10           | —      | —    | —    | 7.36     | 7.76 | 7.78 | 7.95 | 8.01 |
|                                   | 20           | —      | —    | —    | 7.32     | 7.54 | 7.62 | 7.86 | 7.98 |
|                                   | 25           | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 30           | —      | —    | —    | 7.29     | 7.42 | 7.61 | 7.48 | 7.95 |
|                                   | 50           | —      | —    | —    | 7.22     | 7.37 | 7.60 | 7.63 | 7.93 |
|                                   | 75           | —      | —    | —    | —        | 7.29 | 7.60 | 7.69 | 7.85 |
|                                   | 100          | —      | —    | —    | —        | —    | 7.55 | 7.70 | 7.80 |
|                                   | 125          | —      | —    | —    | —        | —    | —    | 7.91 | —    |
|                                   | 150          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 200          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | Botm.        | —      | —    | —    | —        | —    | —    | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —      | —    | —    | —        | —    | 0.19 | —    | 0.26 |
|                                   | 10           | —      | —    | —    | —        | —    | 0.23 | —    | 0.30 |
|                                   | 20           | —      | —    | —    | —        | —    | 0.28 | —    | 0.41 |
|                                   | 25           | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 30           | —      | —    | —    | —        | —    | 0.28 | —    | 0.43 |
|                                   | 50           | —      | —    | —    | —        | —    | 0.30 | —    | 0.49 |
|                                   | 75           | —      | —    | —    | —        | —    | 0.39 | —    | 0.52 |
|                                   | 100          | —      | —    | —    | —        | —    | 0.52 | —    | 0.80 |
|                                   | 125          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 150          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | 200          | —      | —    | —    | —        | —    | —    | —    | —    |
|                                   | Botm.        | —      | —    | —    | —        | —    | —    | —    | —    |

[illegible]



| Date                              |              | (3) June |      |      |      |      |
|-----------------------------------|--------------|----------|------|------|------|------|
| Sta. No.                          |              | 01       | 02   | 03   | 04   | 05   |
| Day                               |              | 13       | 12   | 12   | 12   | 12   |
| Item                              | Time<br>Z(m) | 0035     | 2340 | 2149 | 1930 | 1725 |
| O <sub>2</sub><br><br>cc<br>/ L   | 0            | 5.69     | 5.72 | 5.83 | 5.63 | 5.70 |
|                                   | 10           | 5.69     | 5.72 | 5.76 | 5.50 | 5.61 |
|                                   | 20           | 5.45     | 5.69 | 5.72 | 5.45 | 5.61 |
|                                   | 25           | —        | —    | —    | —    | —    |
|                                   | 30           | 5.28     | 5.61 | 5.72 | 5.41 | 5.50 |
|                                   | 50           | 5.28     | —    | 5.67 | 5.32 | 5.41 |
|                                   | 75           | —        | —    | —    | 5.17 | 5.28 |
|                                   | 100          | —        | —    | —    | —    | 4.70 |
|                                   | 125          | —        | —    | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    |
|                                   | Botm.        | 5.19     | 5.31 | 4.95 | 5.12 | 4.53 |
| pH                                | 0            | —        | —    | —    | —    | —    |
|                                   | 10           | —        | —    | —    | —    | —    |
|                                   | 20           | —        | —    | —    | —    | —    |
|                                   | 25           | —        | —    | —    | —    | —    |
|                                   | 30           | —        | —    | —    | —    | —    |
|                                   | 50           | —        | —    | —    | —    | —    |
|                                   | 75           | —        | —    | —    | —    | —    |
|                                   | 100          | —        | —    | —    | —    | —    |
|                                   | 125          | —        | —    | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    |
|                                   | Botm.        | —        | —    | —    | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —        | —    | —    | —    | —    |
|                                   | 10           | —        | —    | —    | —    | —    |
|                                   | 20           | —        | —    | —    | —    | —    |
|                                   | 25           | —        | —    | —    | —    | —    |
|                                   | 30           | —        | —    | —    | —    | —    |
|                                   | 50           | —        | —    | —    | —    | —    |
|                                   | 75           | —        | —    | —    | —    | —    |
|                                   | 100          | —        | —    | —    | —    | —    |
|                                   | 125          | —        | —    | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    |
|                                   | Botm.        | —        | —    | —    | —    | —    |

④ August

| 01   | 02   | 03   | 04   | 05   | 06   | 07   | 08   |
|------|------|------|------|------|------|------|------|
| 15   | 15   | 15   | 15   | 15   | 15   | 15   | 15   |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | 6.99 | 5.36 | 8.59 | —    | 5.85 | 6.74 | 6.26 |
| 6.08 | 7.08 | —    | 6.21 | 8.74 | 7.82 | 6.27 | 6.17 |
| 6.79 | 6.79 | 5.16 | 6.58 | —    | 6.62 | 6.18 | 6.00 |
| —    | —    | —    | —    | —    | —    | —    | —    |
| 8.32 | 6.30 | 7.71 | —    | 6.18 | 5.70 | 6.50 | 7.26 |
| 7.03 | 5.15 | 9.15 | 8.23 | 6.50 | 7.09 | 5.65 | 6.59 |
| —    | —    | 8.85 | 7.93 | 5.73 | 7.60 | 6.79 | 7.42 |
| —    | —    | —    | 6.68 | 6.77 | 6.39 | 5.15 | 6.18 |
| —    | —    | —    | —    | —    | 5.28 | 6.81 | —    |
| —    | —    | —    | —    | —    | —    | —    | 5.65 |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    |
| 7.35 | 7.57 | 7.82 | 7.81 | 7.69 | 7.79 | 7.50 | 7.65 |
| 7.39 | 7.31 | 7.70 | 7.88 | 7.60 | 7.81 | 7.56 | 7.68 |
| 7.36 | 7.48 | 7.42 | 7.86 | 7.75 | 7.61 | 7.53 | 7.61 |
| —    | —    | —    | —    | —    | —    | —    | —    |
| 7.48 | 7.49 | 7.48 | 7.77 | 7.76 | 7.48 | 7.56 | 7.51 |
| 7.45 | 7.48 | 7.41 | 7.70 | 7.76 | 7.48 | 7.60 | 7.23 |
| —    | —    | 7.30 | 7.64 | 7.54 | 7.49 | 7.93 | 7.25 |
| —    | —    | —    | 7.64 | 7.50 | 7.57 | 7.60 | 7.25 |
| —    | —    | —    | —    | —    | 7.34 | 7.57 | 7.16 |
| —    | —    | —    | —    | —    | —    | —    | 7.16 |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | —    | 0.30 | —    | 0.32 | —    | 0.15 | —    |
| —    | —    | 0.32 | —    | 0.36 | —    | 0.17 | —    |
| —    | —    | 0.41 | —    | 0.19 | —    | 0.23 | —    |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | —    | 0.32 | —    | 0.30 | —    | 0.30 | —    |
| —    | —    | 0.30 | —    | 0.39 | —    | 0.34 | —    |
| —    | —    | 0.45 | —    | 0.41 | —    | 0.49 | —    |
| —    | —    | —    | —    | 0.47 | —    | 0.39 | —    |
| —    | —    | —    | —    | —    | —    | 0.36 | —    |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    |

| Date                              |              | ⑤ October |      |      |      |      |      |                                               |
|-----------------------------------|--------------|-----------|------|------|------|------|------|-----------------------------------------------|
| Sta. No.                          |              | 01        | 02   | 03   | 04   | 05   | 06   | 127° 50' 00"<br>33° 11' 30"<br>S <sub>2</sub> |
| Day                               |              | 2         | 9    | 10   | 10   | 10   | 10   | 10                                            |
| Item                              | Time<br>Z(m) | 2040      | 2150 | 0130 | 0330 | 0610 | 0815 | 1130                                          |
| O <sub>2</sub><br><br>cc<br>/ L   | 0            | 4.66      | 5.19 | 5.07 | 5.88 | 5.94 | 5.98 | 5.49                                          |
|                                   | 10           | 5.58      | 5.43 | 4.07 | 6.06 | 5.33 | 5.61 | 5.35                                          |
|                                   | 20           | 5.23      | 5.10 | 5.17 | 5.68 | 5.49 | 5.57 | 5.11                                          |
|                                   | 25           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 30           | 5.23      | 4.97 | 5.15 | 4.57 | 5.68 | 4.97 | 4.97                                          |
|                                   | 50           | 3.95      | 4.46 | 5.15 | 5.62 | 5.43 | 4.89 | 4.89                                          |
|                                   | 75           | —         | —    | —    | 3.71 | 4.46 | 4.70 | 4.56                                          |
|                                   | 100          | —         | —    | —    | —    | 4.44 | 4.40 | 4.50                                          |
|                                   | 125          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 150          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 200          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | Botm.        | 3.41      | 4.28 | 5.09 | 3.63 | 4.36 | 4.36 | 4.46                                          |
| pH                                | 0            | 7.89      | 7.58 | 7.77 | 7.48 | 7.66 | 7.94 | 7.81                                          |
|                                   | 10           | 7.98      | 7.99 | 8.02 | 7.70 | 8.00 | 8.00 | 7.77                                          |
|                                   | 20           | 8.01      | 8.00 | 8.01 | 7.86 | 7.90 | 7.88 | 8.00                                          |
|                                   | 25           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 30           | 7.68      | 7.81 | 7.93 | 7.80 | 7.99 | 7.95 | 8.02                                          |
|                                   | 50           | 7.55      | 7.66 | 7.38 | 7.65 | 7.76 | 7.96 | 7.95                                          |
|                                   | 75           | —         | —    | —    | 7.59 | 7.64 | 7.72 | 7.79                                          |
|                                   | 100          | —         | —    | —    | —    | 7.59 | 7.58 | 7.44                                          |
|                                   | 125          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 150          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 200          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | Botm.        | 7.46      | 7.51 | 7.26 | 7.57 | 7.59 | 7.34 | 7.33                                          |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 10           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 20           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 25           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 30           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 50           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 75           | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 100          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 125          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 150          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | 200          | —         | —    | —    | —    | —    | —    | —                                             |
|                                   | Botm.        | —         | —    | —    | —    | —    | —    | —                                             |

⑥ December

| 01   | 02   | 03   | 04   | 06   | 08   | E6   | E5   | E4   |
|------|------|------|------|------|------|------|------|------|
| 19   | 19   | 19   | 19   | 20   | 20   | 20   | 20   | 20   |
| 1530 | 1640 | 1810 | 2040 | 0050 | 0505 | 1155 | 1510 | 1815 |
| 5.69 | 6.08 | 5.67 | 5.18 | 4.99 | 4.95 | 5.11 | 5.05 | 5.05 |
| 5.57 | 5.67 | 5.38 | 5.16 | 5.05 | 4.85 | 5.11 | 5.07 | 4.85 |
| 5.62 | 5.72 | 5.41 | 5.22 | 5.01 | 4.91 | 5.13 | 5.05 | 5.01 |
| —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 5.67 | 5.93 | 5.63 | 5.16 | 4.99 | 5.03 | 5.16 | 5.01 | 5.16 |
| —    | —    | 5.53 | 4.67 | 4.87 | 5.05 | 5.18 | 5.01 | 5.07 |
| —    | —    | —    | 4.10 | 4.95 | 4.72 | 5.16 | 5.01 | 5.05 |
| —    | —    | —    | —    | 4.95 | 5.03 | 5.01 | —    | —    |
| —    | —    | —    | —    | —    | 4.97 | —    | —    | —    |
| —    | —    | —    | —    | —    | 4.94 | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 5.70 | 5.36 | 5.49 | 4.87 | 4.93 | 4.06 | —    | 4.99 | 5.05 |
| 8.10 | 8.23 | 8.30 | 8.30 | 8.09 | 8.12 | 8.33 | 8.32 | 8.01 |
| 8.10 | 8.21 | 8.30 | 8.33 | 8.20 | 8.17 | 8.38 | 8.33 | 8.19 |
| 8.20 | 8.25 | 8.30 | 8.39 | 8.32 | 8.20 | 8.34 | 8.35 | 8.20 |
| —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 8.20 | 8.23 | 8.30 | 8.38 | 8.32 | 8.23 | 8.32 | 8.39 | 8.20 |
| —    | —    | 8.34 | 8.30 | 8.30 | 8.37 | 8.32 | 8.37 | 8.22 |
| —    | —    | —    | 8.25 | 8.29 | 8.38 | 8.33 | 8.37 | 8.23 |
| —    | —    | —    | —    | 8.29 | 8.40 | 3.33 | —    | —    |
| —    | —    | —    | —    | —    | 8.30 | —    | —    | —    |
| —    | —    | —    | —    | —    | 8.26 | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 8.21 | 8.23 | 8.14 | 8.20 | 8.31 | 8.22 | 8.32 | 8.37 | 8.23 |
| 0.58 | 0.90 | 0.70 | 1.08 | 0.60 | 0.30 | 0.33 | 0.48 | 0.45 |
| 0.75 | 1.23 | 0.25 | 0.43 | 0.60 | 0.33 | 0.38 | 0.30 | 0.33 |
| 0.95 | 0.75 | 0.43 | 0.75 | 0.50 | 0.48 | 0.25 | 0.60 | 0.43 |
| —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 0.83 | 0.98 | 0.65 | 0.85 | 0.58 | 0.55 | 0.53 | 0.60 | 0.30 |
| —    | —    | 0.73 | 0.83 | 0.63 | 0.60 | 0.55 | 0.64 | 0.33 |
| —    | —    | —    | 1.03 | 0.50 | 0.65 | 0.86 | 0.67 | 0.55 |
| —    | —    | —    | —    | 0.53 | 0.80 | 0.96 | —    | —    |
| —    | —    | —    | —    | —    | 1.00 | —    | —    | —    |
| —    | —    | —    | —    | —    | 1.18 | —    | —    | —    |
| —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 0.50 | 1.48 | 0.83 | 1.00 | 0.15 | 0.08 | 0.98 | 0.65 | 0.58 |

## 204 선 해양 관측 성적

Oceanographic Data, Line 204

| Date                              |              | ① March |      |      |      |      |      |
|-----------------------------------|--------------|---------|------|------|------|------|------|
| Sta. No.                          |              | 01      | 02   | 03   | 04   | 05   | 06   |
| Day                               |              | 15      | 15   | 15   | 21   | 21   | 21   |
| Item                              | Time<br>Z(m) | 0555    | 0725 | 0905 | 0905 | 1140 | 1215 |
| O <sub>2</sub><br><br>cc/L        | 0            | 6.51    | 6.45 | 6.51 | 6.23 | 6.11 | 5.77 |
|                                   | 10           | 6.57    | 6.49 | 6.51 | 5.94 | 5.75 | 5.70 |
|                                   | 20           | —       | —    | —    | —    | —    | —    |
|                                   | 25           | 6.55    | —    | 6.47 | 6.36 | 5.73 | 5.66 |
|                                   | 50           | —       | —    | —    | 6.30 | 5.79 | 5.60 |
|                                   | 75           | —       | —    | —    | —    | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —    | 5.58 |
|                                   | Botm.        | 6.55    | 6.47 | 6.45 | 5.83 | 5.81 | 5.56 |
| pH                                | 0            | —       | —    | —    | —    | —    | —    |
|                                   | 10           | —       | —    | —    | —    | —    | —    |
|                                   | 20           | —       | —    | —    | —    | —    | —    |
|                                   | 25           | —       | —    | —    | —    | —    | —    |
|                                   | 50           | —       | —    | —    | —    | —    | —    |
|                                   | 75           | —       | —    | —    | —    | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —    | —    |
|                                   | Botm.        | —       | —    | —    | —    | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —       | —    | —    | —    | —    | —    |
|                                   | 10           | —       | —    | —    | —    | —    | —    |
|                                   | 20           | —       | —    | —    | —    | —    | —    |
|                                   | 25           | —       | —    | —    | —    | —    | —    |
|                                   | 30           | —       | —    | —    | —    | —    | —    |
|                                   | 50           | —       | —    | —    | —    | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —    | —    |
|                                   | Botm.        | —       | —    | —    | —    | —    | —    |



| Date                              |              | ③ June |      |      |      |      |
|-----------------------------------|--------------|--------|------|------|------|------|
| Sta. No.                          |              | 01     | 02   | 03   | 04   | 05   |
| Day                               |              | 13     | 13   | 13   | 14   | 14   |
| Item                              | Time<br>Z(m) | 0135   | 0245 | 0415 | 1225 | 1340 |
| O <sub>2</sub><br><br>cc<br>L     | 0            | 5.65   | 5.72 | 5.72 | 5.74 | 5.74 |
|                                   | 10           | 5.63   | 5.72 | 5.69 | 5.69 | 5.72 |
|                                   | 20           | 5.61   | 5.65 | 5.67 | 5.65 | 5.69 |
|                                   | 30           | 5.43   | —    | 5.63 | 5.61 | 5.65 |
|                                   | 50           | —      | —    | —    | 5.39 | 5.43 |
|                                   | 75           | —      | —    | —    | —    | 4.97 |
|                                   | 100          | —      | —    | —    | —    | —    |
|                                   | Botm.        | 5.12   | 5.47 | 5.39 | 5.28 | 4.95 |
| pH                                | 0            | —      | —    | —    | —    | —    |
|                                   | 10           | —      | —    | —    | —    | —    |
|                                   | 20           | —      | —    | —    | —    | —    |
|                                   | 30           | —      | —    | —    | —    | —    |
|                                   | 50           | —      | —    | —    | —    | —    |
|                                   | 75           | —      | —    | —    | —    | —    |
|                                   | 100          | —      | —    | —    | —    | —    |
|                                   | Botm.        | —      | —    | —    | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —      | —    | —    | —    | —    |
|                                   | 10           | —      | —    | —    | —    | —    |
|                                   | 20           | —      | —    | —    | —    | —    |
|                                   | 30           | —      | —    | —    | —    | —    |
|                                   | 50           | —      | —    | —    | —    | —    |
|                                   | 75           | —      | —    | —    | —    | —    |
|                                   | 100          | —      | —    | —    | —    | —    |
|                                   | Botm.        | —      | —    | —    | —    | —    |



## ④ August

| 01   | 02   | 03   | 04   | 05   | 06   |
|------|------|------|------|------|------|
| 10   | 10   | 10   | 13   | 13   | 13   |
| 0735 | 0935 | 1110 | 0811 | 1017 | 1215 |
| 5.05 | 5.11 | 5.07 | 5.05 | 4.99 | 5.08 |
| 5.01 | 5.29 | 5.65 | 4.89 | 5.01 | 5.13 |
| 4.97 | 5.25 | 5.17 | 4.85 | 4.95 | 5.17 |
| 4.67 | —    | 5.17 | 4.75 | 4.89 | 5.03 |
| —    | —    | —    | 4.75 | 4.71 | 4.95 |
| —    | —    | —    | —    | 4.04 | 4.36 |
| —    | —    | —    | —    | —    | 4.08 |
| 4.04 | 5.23 | 4.85 | 4.17 | 4.04 | 4.04 |
| 7.62 | 7.40 | 8.02 | 7.30 | 7.42 | 7.87 |
| 7.75 | 7.68 | 8.09 | 7.42 | 7.64 | 7.89 |
| 7.59 | 7.63 | 7.80 | 7.49 | 7.80 | 7.78 |
| 7.48 | —    | 7.62 | 7.34 | 7.88 | 7.71 |
| —    | —    | —    | 7.49 | 7.88 | 7.59 |
| —    | —    | —    | —    | 7.89 | 7.93 |
| —    | —    | —    | —    | —    | 7.75 |
| 7.38 | 7.65 | 7.60 | 7.49 | 7.83 | 7.69 |
| —    | —    | 0.24 | —    | 0.18 | —    |
| —    | —    | 0.31 | —    | 0.18 | —    |
| —    | —    | 0.39 | —    | 0.24 | —    |
| —    | —    | 0.43 | —    | 0.35 | —    |
| —    | —    | 0.56 | —    | 0.54 | —    |
| —    | —    | —    | —    | 0.66 | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | 0.70 | —    |

# 203선 해양관측성적

Oceanographic Data, Line 203

| Date               |       | ① March |      |      | ② April |      |      |
|--------------------|-------|---------|------|------|---------|------|------|
| Sta. No.           |       | 01      | 02   | 03   | 01      | 02   | 03   |
| Day                |       | 25      | 25   | 22   | 30      | 30   | 30   |
| Item               | Time  |         |      |      |         |      |      |
|                    | Z(m)  | 1225    | 1055 | 1715 | 1050    | 1215 | 1420 |
| O <sub>2</sub>     | 0     | 5.32    | 5.32 | 5.34 | 5.71    | 5.98 | 5.67 |
|                    | 10    | 5.30    | 5.30 | 5.36 | 5.71    | 5.98 | 5.75 |
|                    | 20    | 5.39    | 5.30 | 5.39 | 5.88    | 5.75 | 5.69 |
|                    | 25    | —       | —    | —    | —       | —    | —    |
|                    | 30    | —       | —    | —    | —       | —    | —    |
|                    | 50    | 5.39    | 5.28 | 5.36 | 5.92    | 5.71 | 5.56 |
|                    | 75    | —       | —    | —    | —       | 5.65 | —    |
|                    | 100   | —       | —    | —    | —       | —    | —    |
|                    | 125   | —       | —    | —    | —       | —    | —    |
|                    | 150   | —       | —    | —    | —       | —    | —    |
| cc/L               | 200   | —       | —    | —    | —       | —    | —    |
|                    | Botm. | 5.39    | 5.26 | 5.32 | 5.96    | 5.56 | 5.44 |
| pH                 | 0     | —       | —    | —    | —       | —    | —    |
|                    | 10    | —       | —    | —    | —       | —    | —    |
|                    | 20    | —       | —    | —    | —       | —    | —    |
|                    | 25    | —       | —    | —    | —       | —    | —    |
|                    | 30    | —       | —    | —    | —       | —    | —    |
|                    | 50    | —       | —    | —    | —       | —    | —    |
|                    | 75    | —       | —    | —    | —       | —    | —    |
|                    | 100   | —       | —    | —    | —       | —    | —    |
|                    | 125   | —       | —    | —    | —       | —    | —    |
|                    | 150   | —       | —    | —    | —       | —    | —    |
| PO <sub>i</sub> -P | 200   | —       | —    | —    | —       | —    | —    |
|                    | Botm. | —       | —    | —    | —       | —    | —    |
| μg-at/L            | 0     | —       | —    | —    | —       | —    | —    |
|                    | 10    | —       | —    | —    | —       | —    | —    |
|                    | 20    | —       | —    | —    | —       | —    | —    |
|                    | 25    | —       | —    | —    | —       | —    | —    |
|                    | 30    | —       | —    | —    | —       | —    | —    |
|                    | 50    | —       | —    | —    | —       | —    | —    |
|                    | 75    | —       | —    | —    | —       | —    | —    |
|                    | 100   | —       | —    | —    | —       | —    | —    |
|                    | 125   | —       | —    | —    | —       | —    | —    |
|                    | 150   | —       | —    | —    | —       | —    | —    |
| μg-at/L            | 200   | —       | —    | —    | —       | —    | —    |
|                    | Botm. | —       | —    | —    | —       | —    | —    |

| ④ August |      |      | ⑤ October |      |      |
|----------|------|------|-----------|------|------|
| 01       | 02   | 03   | 01        | 02   | 03   |
| 13       | 13   | 13   | 13        | 31   | 11   |
| 1715     | 1850 | 2110 | 1240      | 1100 | 1210 |
| 4.87     | 5.09 | 5.14 | 4.54      | 5.07 | 3.57 |
| 4.95     | 5.13 | 5.47 | 4.54      | 4.46 | 3.52 |
| 4.85     | 4.79 | 5.47 | 5.22      | 5.05 | 5.09 |
| —        | —    | —    | —         | —    | —    |
| 4.85     | 4.71 | 5.20 | 5.18      | 4.97 | 4.84 |
| —        | 4.05 | 5.01 | 5.16      | 4.70 | 4.78 |
| —        | 4.04 | 4.65 | 5.14      | 4.36 | 4.76 |
| —        | —    | 4.63 | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| 4.67     | 4.04 | 4.11 | 5.12      | 4.16 | 3.83 |
| 7.81     | 7.84 | 7.79 | 7.90      | 7.94 | 7.54 |
| 7.74     | 7.80 | 7.80 | 7.95      | 7.96 | 7.80 |
| 7.60     | 7.76 | 7.84 | 7.92      | 7.93 | 7.95 |
| —        | —    | —    | —         | —    | —    |
| 7.55     | 7.76 | 7.75 | 7.92      | 7.92 | 7.85 |
| —        | 7.66 | 7.62 | —         | 7.90 | 7.70 |
| —        | 7.68 | 7.85 | —         | 7.88 | 7.20 |
| —        | —    | 7.76 | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| 7.51     | 7.71 | 7.66 | 7.95      | 7.82 | 7.30 |
| —        | —    | 0.16 | —         | —    | —    |
| —        | —    | 0.35 | —         | —    | —    |
| —        | —    | 0.39 | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | 0.43 | —         | —    | —    |
| —        | —    | 0.49 | —         | —    | —    |
| —        | —    | 0.68 | —         | —    | —    |
| —        | —    | 0.70 | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | —    | —         | —    | —    |
| —        | —    | 0.74 | —         | —    | —    |



서 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS

WESTERN WATERS

(Oxygen pH and  $po_4-p$ )

1 9 6 5



## 316선 해양관측성적

Oceanographic Data, Line 316

| Date               |              | ① January |      |      |      |      |      |      |
|--------------------|--------------|-----------|------|------|------|------|------|------|
| Sta. No.           |              | 08        | 10   | 12   | 14   | 16   | 18   | 20   |
| Day                |              | 3         | 3    | 3    | 3    | 3    | 3    | 3    |
| Item               | Time<br>Z(m) | 2115      | 1745 | 1420 | 1100 | 0740 | 0416 | 0105 |
| O <sub>2</sub>     | 0            | 4.97      | 5.16 | 5.11 | 5.16 | 5.13 | 5.32 | 5.46 |
|                    | 10           | 4.97      | 5.16 | 5.24 | 5.01 | 5.05 | 5.34 | 5.57 |
|                    | 20           | 4.97      | 5.05 | 5.16 | 5.07 | 5.05 | 5.36 | 5.53 |
|                    | 25           | —         | —    | —    | —    | —    | —    | —    |
|                    | 30           | 4.97      | 5.03 | 5.07 | 5.07 | 5.05 | 5.46 | 5.57 |
|                    | 50           | 4.96      | 4.97 | 5.11 | 5.07 | 5.05 | —    | —    |
|                    | 75           | 4.95      | 5.04 | 4.99 | 5.05 | 4.99 | —    | —    |
|                    | 100          | —         | 5.02 | 4.35 | —    | —    | —    | —    |
|                    | 125          | —         | —    | —    | —    | —    | —    | —    |
|                    | 150          | —         | —    | —    | —    | —    | —    | —    |
| pH                 | 200          | —         | —    | —    | —    | —    | —    | —    |
|                    | Botm.        | 4.91      | 4.33 | 3.75 | 3.86 | 5.05 | 5.36 | 5.48 |
| pH                 | 0            | 8.40      | 8.44 | 8.42 | 8.39 | 8.36 | 8.34 | 8.32 |
|                    | 10           | 8.46      | 8.44 | 8.40 | 8.40 | 8.38 | 8.34 | 8.31 |
|                    | 20           | 8.45      | 8.48 | 8.44 | 8.40 | 8.39 | 8.38 | 8.30 |
|                    | 25           | —         | —    | —    | —    | —    | —    | —    |
|                    | 30           | 8.42      | 8.46 | 8.42 | 8.42 | 8.40 | 8.36 | 8.32 |
|                    | 50           | 8.36      | 8.50 | 8.44 | 8.42 | 8.39 | 8.38 | —    |
|                    | 75           | 8.40      | 8.50 | 8.43 | 8.40 | —    | —    | —    |
|                    | 100          | —         | 8.47 | 8.40 | —    | —    | —    | —    |
|                    | 125          | —         | —    | —    | —    | —    | —    | —    |
|                    | 150          | —         | —    | —    | —    | —    | —    | —    |
| PO <sub>4</sub> -P | 200          | —         | —    | —    | —    | —    | —    | —    |
|                    | Botm.        | 8.44      | 8.40 | 8.38 | 8.41 | 8.40 | 8.39 | 8.30 |
| μg-at/L            | 0            | 0.19      | 0.24 | 0.21 | 0.25 | 0.15 | 0.13 | 0.06 |
|                    | 10           | 0.19      | 0.26 | 0.22 | 0.27 | 0.22 | 0.15 | 0.07 |
|                    | 20           | 0.19      | 0.26 | 0.23 | 0.29 | 0.21 | 0.17 | 0.07 |
|                    | 25           | —         | —    | —    | —    | —    | —    | —    |
|                    | 30           | 0.19      | 0.27 | 0.23 | 0.23 | 0.19 | 0.17 | 0.11 |
|                    | 50           | 0.24      | 0.31 | 0.21 | 0.21 | 0.20 | 0.18 | —    |
|                    | 75           | 0.26      | 0.24 | 0.23 | 0.16 | 0.20 | —    | —    |
|                    | 100          | —         | 0.23 | 0.23 | —    | —    | —    | —    |
|                    | 125          | —         | —    | —    | —    | —    | —    | —    |
|                    | 150          | —         | —    | —    | —    | —    | —    | —    |
| μg-at/L            | 200          | —         | —    | —    | —    | —    | —    | —    |
|                    | Botm.        | 0.28      | 0.26 | 0.25 | 0.16 | 0.21 | 0.21 | 0.09 |



## 315선 해양관측성적

Oceanographic Data, Line 315

| Date               |       | ① August |      |      |      |      |      |      |      |
|--------------------|-------|----------|------|------|------|------|------|------|------|
| Sta. No.           |       | 06       | 08   | 10   | 12   | 14   | 16   | 18   | 20   |
| Day                |       | 27       | 27   | 27   | 27   | 26   | 26   | 26   | 26   |
| Item               | Time  | —        | —    | —    | —    | —    | —    | —    | —    |
|                    | Z(m)  |          |      |      |      |      |      |      |      |
| O <sub>2</sub>     | 0     | 6.63     | 6.33 | 5.46 | 6.42 | 7.01 | 6.15 | —    | 5.12 |
|                    | 10    | 5.38     | 9.95 | 5.52 | 5.24 | 6.50 | 7.29 | —    | 5.41 |
|                    | 20    | 6.36     | 5.46 | 5.34 | 5.37 | 5.85 | —    | —    | —    |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —    |
|                    | 30    | 5.57     | 5.41 | 6.02 | 5.73 | 6.93 | 6.90 | 5.97 | —    |
|                    | 50    | 5.52     | 4.95 | 6.20 | 5.72 | 5.45 | 6.36 | 8.20 | —    |
|                    | 75    | 4.37     | 4.94 | 4.51 | 4.35 | 4.77 | 7.63 | 6.48 | —    |
|                    | 100   | 5.57     | 4.54 | 5.69 | 5.28 | 5.50 | —    | 5.12 | —    |
|                    | 125   | 6.74     | 3.49 | —    | 4.25 | —    | —    | 5.41 | —    |
|                    | 150   | 4.70     | 5.65 | —    | —    | —    | —    | —    | —    |
| cc/L               | 200   | 3.90     | 3.41 | —    | —    | —    | —    | —    | —    |
|                    | Botm. | —        | —    | —    | —    | —    | —    | —    | —    |
| pH                 | 0     | 7.63     | 7.73 | 7.70 | 7.78 | 7.79 | 7.64 | 7.71 | 7.70 |
|                    | 10    | 7.66     | 7.76 | 7.77 | 7.78 | 7.78 | 7.71 | 7.79 | 7.75 |
|                    | 20    | 7.71     | 7.74 | 7.79 | 7.74 | 7.73 | 7.88 | 7.76 | 7.68 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —    |
|                    | 30    | 7.67     | 7.75 | 7.83 | 7.73 | 7.60 | 7.90 | 7.69 | 7.60 |
|                    | 50    | 7.62     | 7.65 | 7.77 | 7.68 | 7.59 | 7.69 | 7.60 | 7.52 |
|                    | 75    | 7.58     | 7.44 | 7.62 | 7.54 | 7.58 | 7.75 | 7.58 | —    |
|                    | 100   | 7.53     | 7.40 | 7.62 | 7.47 | 7.63 | —    | —    | —    |
|                    | 125   | 7.45     | 7.36 | 7.51 | 7.42 | —    | —    | —    | —    |
|                    | 150   | 7.41     | 7.29 | —    | —    | —    | —    | —    | —    |
| PO <sub>4</sub> -P | 200   | 7.41     | 7.26 | —    | —    | —    | —    | —    | —    |
|                    | Botm. | —        | —    | —    | —    | —    | —    | —    | —    |
| μg-at/L            | 0     | 0.13     | —    | —    | —    | 0.26 | —    | —    | —    |
|                    | 10    | 0.17     | —    | —    | —    | 0.23 | —    | —    | —    |
|                    | 20    | 0.21     | —    | —    | —    | 0.21 | —    | —    | —    |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —    |
|                    | 30    | 0.28     | —    | —    | —    | 0.19 | —    | —    | —    |
|                    | 50    | 0.36     | —    | —    | —    | 0.36 | —    | —    | —    |
|                    | 75    | 0.41     | —    | —    | —    | 0.43 | —    | —    | —    |
|                    | 100   | 0.43     | —    | —    | —    | 0.60 | —    | —    | —    |
|                    | 125   | 0.49     | —    | —    | —    | —    | —    | —    | —    |
|                    | 150   | 0.63     | —    | —    | —    | —    | —    | —    | —    |
| μg-at/L            | 200   | 0.73     | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm. | —        | —    | —    | —    | —    | —    | —    | —    |

# 314선 해양관측성적

Oceanographic Data, Line 314

| Date               |        | ① March |      |      |      |      |      |      |      |
|--------------------|--------|---------|------|------|------|------|------|------|------|
| Sta. No.           |        | 02      | 03   | 04   | 05   | 06   | 07   | 08   | 09   |
| Dcy                |        | 21      | 21   | 21   | 21   | 22   | 22   | 22   | 22   |
| Item               | Time   |         |      |      |      |      |      |      |      |
|                    | (Z: m) | 1720    | 1930 | 2235 | 2330 | 0140 | 0330 | 0530 | 0735 |
| O <sub>2</sub>     | 0      | 5.60    | 5.45 | 5.43 | 5.41 | —    | 5.39 | 5.41 | 5.39 |
|                    | 10     | 5.58    | 5.41 | 5.47 | 5.36 | 5.43 | 5.32 | 5.41 | 5.41 |
|                    | 20     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 25     | 5.34    | 5.36 | 5.39 | 5.36 | —    | —    | 5.32 | 5.36 |
|                    | 30     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 50     | 5.30    | 5.30 | 5.32 | 5.32 | —    | 5.30 | 5.30 | 5.36 |
|                    | 75     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 100    | 5.24    | 5.26 | —    | 5.34 | 5.36 | —    | —    | —    |
|                    | 125    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 150    | —       | —    | —    | —    | —    | —    | —    | —    |
| pH                 | 200    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm.  | 5.20    | 5.26 | 5.50 | —    | 5.32 | 5.24 | 5.30 | 5.32 |
|                    | 0      | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 10     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 20     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 25     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 30     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 50     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 75     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 100    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 125    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 150    | —       | —    | —    | —    | —    | —    | —    | —    |
| PO <sub>4</sub> -P | 200    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm.  | —       | —    | —    | —    | —    | —    | —    | —    |
| μg-at/L            | 0      | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 10     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 20     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 25     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 30     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 50     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 75     | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 100    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 125    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 150    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | 200    | —       | —    | —    | —    | —    | —    | —    | —    |
|                    | Botm.  | —       | —    | —    | —    | —    | —    | —    | —    |

| Date                              |              | ② May |      |      |      |      |      | April |
|-----------------------------------|--------------|-------|------|------|------|------|------|-------|
| Sta. No.                          |              | 02    | 03   | 04   | 05   | 06   | 07   | 08    |
| Day                               |              | 1     | 1    | 1    | 1    | 1    | 1    | 30    |
| Item                              | Time<br>Z(m) | 1020  | 0830 | 0620 | 0425 | 0220 | 0010 | 2210  |
| O <sub>2</sub><br><br>cc<br>L     | 0            | 5.36  | 5.34 | 5.54 | 6.06 | 6.13 | 5.69 | 5.52  |
|                                   | 10           | 5.31  | 5.25 | 5.56 | 5.52 | 6.25 | 5.61 | 5.54  |
|                                   | 20           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 25           | 5.29  | 4.98 | 5.14 | 5.79 | 5.81 | 5.56 | 5.56  |
|                                   | 30           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 50           | 5.25  | 4.96 | 5.25 | 5.22 | 6.06 | 5.54 | 5.65  |
|                                   | 75           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 100          | 5.02  | —    | —    | —    | —    | —    | —     |
|                                   | 125          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 150          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 200          | —     | —    | —    | —    | —    | —    | —     |
|                                   | Botm.        | 5.00  | 4.96 | 5.31 | 5.52 | 5.77 | 5.14 | 5.65  |
| pH                                | 0            | —     | —    | —    | —    | —    | —    | —     |
|                                   | 10           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 20           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 25           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 30           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 50           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 75           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 100          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 125          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 150          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 200          | —     | —    | —    | —    | —    | —    | —     |
|                                   | Botm.        | —     | —    | —    | —    | —    | —    | —     |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —     | —    | —    | —    | —    | —    | —     |
|                                   | 10           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 20           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 25           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 30           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 50           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 75           | —     | —    | —    | —    | —    | —    | —     |
|                                   | 100          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 125          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 150          | —     | —    | —    | —    | —    | —    | —     |
|                                   | 200          | —     | —    | —    | —    | —    | —    | —     |
|                                   | Botm.        | —     | —    | —    | —    | —    | —    | —     |



| Date               |              | ④ October |      |      |      |      |      |      | ⑤ Dec. | Jan. 1966 |      |      |  |
|--------------------|--------------|-----------|------|------|------|------|------|------|--------|-----------|------|------|--|
| Sta. No.           |              | 02        | 03   | 04   | 05   | 06   | 07   | 08   | 04     | 06        | 08   | 10   |  |
| Day                |              | 10        | 10   | 10   | 10   | 10   | 11   | 11   | 29     | 2         | 2    | 2    |  |
| Item               | Time<br>Z(m) | 1550      | 1740 | 1945 | 2150 | 2340 | 0150 | 0400 | 1230   | 1215      | 1535 | 1900 |  |
| O <sub>2</sub>     | 0            | 5.90      | 6.12 | 4.18 | 5.57 | 5.07 | 5.39 | 6.08 | 5.28   | 5.28      | 5.31 | 5.46 |  |
|                    | 10           | 5.68      | 5.39 | 5.27 | 5.39 | 5.56 | 5.43 | 5.88 | 5.28   | 5.18      | 5.34 | 5.51 |  |
|                    | 20           | 5.64      | 5.94 | 5.53 | 5.39 | 5.32 | 5.35 | 5.70 | 5.28   | 5.18      | 5.42 | 5.51 |  |
|                    | 25           | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 30           | 5.57      | 4.89 | 5.39 | 5.17 | 5.27 | 4.67 | 5.57 | 5.29   | 5.18      | 5.41 | 5.51 |  |
|                    | 50           | 5.35      | 4.48 | 5.39 | 4.97 | 4.05 | 4.67 | 5.57 | 5.31   | 5.42      | 5.41 | 5.46 |  |
|                    | 75           | 4.16      | 4.35 | 4.50 | 4.36 | 4.44 | 4.67 | 4.93 | —      | 5.46      | 5.41 | —    |  |
|                    | 100          | 3.65      | —    | 4.07 | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 125          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 150          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
| pH                 | 0            | 7.66      | 7.97 | 8.04 | 8.00 | 7.92 | 8.13 | 7.98 | 8.24   | 8.30      | 8.26 | 8.32 |  |
|                    | 10           | 7.94      | 8.09 | 8.16 | 8.13 | 8.14 | 8.13 | 8.03 | 8.26   | 8.30      | 8.28 | 8.30 |  |
|                    | 20           | 8.01      | 8.15 | 8.16 | 8.19 | 8.20 | 8.09 | 8.20 | 8.28   | 8.32      | 8.30 | 8.30 |  |
|                    | 25           | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 30           | 7.95      | 8.00 | 7.89 | 8.20 | 8.16 | 8.08 | 8.20 | 8.21   | 8.32      | 8.30 | 8.29 |  |
|                    | 50           | 7.86      | 8.00 | 8.08 | 8.18 | 7.98 | 7.81 | 8.12 | 8.29   | 8.27      | 8.28 | 8.28 |  |
|                    | 75           | 7.53      | 7.96 | 7.98 | 7.97 | 7.75 | 7.65 | 7.93 | —      | 8.15      | 8.28 | —    |  |
|                    | 100          | 7.53      | —    | 7.68 | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 125          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 150          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
| PO <sub>4</sub> -P | 0            | —         | —    | —    | —    | —    | —    | —    | 0.04   | 0.22      | 0.02 | 0.03 |  |
|                    | 10           | —         | —    | —    | —    | —    | —    | —    | 0.04   | 0.03      | 0.03 | 0.07 |  |
|                    | 20           | —         | —    | —    | —    | —    | —    | —    | 0.08   | 0.03      | 0.04 | 0.12 |  |
|                    | 25           | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 30           | —         | —    | —    | —    | —    | —    | —    | 0.10   | 0.05      | 0.08 | 0.13 |  |
|                    | 50           | —         | —    | —    | —    | —    | —    | —    | 0.15   | 0.09      | 0.09 | 0.17 |  |
|                    | 75           | —         | —    | —    | —    | —    | —    | —    | —      | 0.13      | 0.15 | —    |  |
|                    | 100          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 125          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | 150          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
| μg-at/L            | 200          | —         | —    | —    | —    | —    | —    | —    | —      | —         | —    | —    |  |
|                    | Botm.        | —         | —    | —    | —    | —    | —    | —    | 0.17   | 0.26      | 0.18 | 0.18 |  |

# 313선 해양관측성적

Oceanographic Data, Line 313

| Date                              |              | ① March |      |      |      | ② Aprtl |      |      |
|-----------------------------------|--------------|---------|------|------|------|---------|------|------|
| Sta. No.                          |              | 02      | 03   | 04   | 05   | 02      | 03   | 04   |
| Day                               |              | 22      | 22   | 22   | 22   | 30      | 30   | 30   |
| Item                              | Time<br>Z(m) | 1505    | 1340 | 1200 | 1025 | 1625    | 1750 | 1910 |
| O <sub>2</sub><br>cc<br>L         | 0            | 5.41    | 5.32 | 5.34 | 5.36 | 5.75    | 5.75 | 5.75 |
|                                   | 10           | 5.39    | 5.36 | 5.32 | 5.36 | 5.83    | 5.71 | 5.48 |
|                                   | 20           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 25           | 5.36    | 5.39 | 5.32 | 5.34 | 5.65    | 5.71 | 5.77 |
|                                   | 30           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —       | 5.34 | 5.30 | 5.30 | 5.29    | 5.48 | 5.71 |
|                                   | 75           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 125          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —       | —    | —    | —    | —       | —    | —    |
| Botm.                             |              | 5.36    | 5.32 | 5.30 | 5.30 | 5.35    | 5.42 | 5.67 |
| pH                                | 0            | —       | —    | —    | —    | —       | —    | —    |
|                                   | 10           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 20           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 25           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 30           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 75           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 125          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —       | —    | —    | —    | —       | —    | —    |
| Botm.                             |              | —       | —    | —    | —    | —       | —    | —    |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | —       | —    | —    | —    | —       | —    | —    |
|                                   | 10           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 20           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 25           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 30           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 50           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 75           | —       | —    | —    | —    | —       | —    | —    |
|                                   | 100          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 125          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 150          | —       | —    | —    | —    | —       | —    | —    |
|                                   | 200          | —       | —    | —    | —    | —       | —    | —    |
| Botm.                             |              | —       | —    | —    | —    | —       | —    | —    |

| Date                              |       | ③ August |      |      |      | ④ October |      |      |
|-----------------------------------|-------|----------|------|------|------|-----------|------|------|
| Sta. No.                          |       | 06       | 07   | 08   | 09   | 02        | 03   | 04   |
| Day                               |       | 14       | 14   | 14   | 14   | 11        | 11   | 11   |
| Item                              | Time  | 0806     | 0927 | 1200 | 1335 | 1005      | 0845 | 0705 |
|                                   | Z(m)  |          |      |      |      |           |      |      |
| O <sub>2</sub><br><br>cc<br>L     | 0     | 5.23     | 5.56 | 5.12 | 5.09 | 4.78      | 4.94 | 4.94 |
|                                   | 10    | 5.27     | 5.58 | 5.15 | 5.15 | 4.17      | 5.57 | 4.86 |
|                                   | 20    | 5.11     | 5.03 | 5.15 | 5.25 | 5.11      | 5.13 | 4.78 |
|                                   | 25    | —        | —    | —    | —    | —         | —    | —    |
|                                   | 30    | 5.03     | 4.97 | 5.07 | 5.01 | 5.17      | 4.95 | 4.60 |
|                                   | 50    | 4.86     | 4.88 | 4.81 | 5.10 | 5.05      | 4.62 | 4.54 |
|                                   | 75    | —        | 4.74 | —    | —    | 5.03      | 4.07 | 4.46 |
|                                   | 100   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 125   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 150   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 200   | —        | —    | —    | —    | —         | —    | —    |
|                                   | Botm. | 4.69     | 4.53 | 4.70 | 4.95 | 5.76      | 4.05 | 4.40 |
| pH                                | 0     | 7.98     | 7.98 | 7.82 | 7.71 | 7.85      | 7.91 | 7.36 |
|                                   | 10    | 8.05     | 8.24 | 7.80 | 7.97 | 7.80      | 7.87 | 7.79 |
|                                   | 20    | 8.08     | 8.24 | 7.97 | 7.82 | 7.80      | 8.05 | 7.85 |
|                                   | 25    | —        | —    | —    | —    | —         | —    | —    |
|                                   | 30    | 8.06     | 8.13 | 7.72 | 7.89 | 7.79      | 8.00 | 8.02 |
|                                   | 50    | 7.88     | 8.03 | 7.59 | 7.80 | 7.70      | 7.80 | 7.90 |
|                                   | 75    | —        | 7.89 | —    | —    | 7.51      | 7.60 | 7.74 |
|                                   | 100   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 125   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 150   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 200   | —        | —    | —    | —    | —         | —    | —    |
|                                   | Botm. | 7.90     | 7.86 | 7.68 | 7.79 | 7.49      | 7.45 | 7.74 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0     | —        | 0.12 | —    | —    | —         | —    | —    |
|                                   | 10    | —        | 0.22 | —    | —    | —         | —    | —    |
|                                   | 20    | —        | 0.27 | —    | —    | —         | —    | —    |
|                                   | 25    | —        | —    | —    | —    | —         | —    | —    |
|                                   | 30    | —        | 0.29 | —    | —    | —         | —    | —    |
|                                   | 50    | —        | 0.54 | —    | —    | —         | —    | —    |
|                                   | 75    | —        | 0.70 | —    | —    | —         | —    | —    |
|                                   | 100   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 125   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 150   | —        | —    | —    | —    | —         | —    | —    |
|                                   | 200   | —        | —    | —    | —    | —         | —    | —    |
|                                   | Botm. | —        | —    | —    | —    | —         | —    | —    |

⑤ December

| 02   | 03   | 04   | 05   | 06   | 07   |
|------|------|------|------|------|------|
| 25   | 25   | 25   | 25   | 25   | 25   |
| 2350 | 2230 | 2025 | 1905 | 1745 | 1540 |
| 5.26 | 5.24 | 5.36 | 5.24 | 5.67 | 5.48 |
| 5.21 | 5.11 | 5.36 | 5.88 | 5.67 | 5.46 |
| 5.13 | —    | 5.32 | 5.29 | 5.40 | 5.46 |
| —    | —    | —    | —    | —    | —    |
| 5.16 | 5.11 | 5.30 | 5.32 | 5.36 | 5.46 |
| 5.09 | 5.16 | 5.28 | 5.30 | 5.36 | 5.57 |
| 5.16 | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| 5.40 | 5.22 | 5.26 | 5.30 | 5.36 | 5.42 |
| 8.02 | 8.28 | 8.15 | 8.10 | 8.16 | 8.11 |
| 8.10 | 8.11 | 8.20 | 8.18 | 8.02 | 8.14 |
| 8.30 | 8.28 | 8.20 | 8.20 | 8.02 | 8.20 |
| —    | —    | —    | —    | —    | —    |
| 8.26 | 8.32 | 8.20 | 8.20 | 8.08 | 8.20 |
| 8.22 | 8.30 | 8.22 | 8.20 | 8.08 | 8.20 |
| 8.20 | —    | —    | —    | 8.09 | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| 8.18 | 8.32 | —    | 8.21 | 8.10 | 8.20 |
| 0.05 | 0.13 | 0.18 | 0.13 | 0.07 | 0.04 |
| 0.11 | 0.18 | 0.18 | 0.13 | 0.09 | 0.14 |
| 0.15 | 0.22 | 0.10 | 0.11 | 0.11 | 0.13 |
| —    | —    | —    | —    | —    | —    |
| 0.14 | 0.24 | 0.21 | 0.12 | 0.12 | 0.18 |
| 0.13 | 0.31 | 0.23 | 0.12 | 0.24 | 0.21 |
| 0.14 | —    | —    | —    | 0.29 | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| 0.22 | 0.35 | 0.28 | 0.14 | 0.31 | 0.22 |



## 312선 해양관측성적

Oceanographic Data, Line 312

| Date                       |              | ① August |      |      |      |      |      |      |      | ② December |      |      |      |      |
|----------------------------|--------------|----------|------|------|------|------|------|------|------|------------|------|------|------|------|
| Sta. No.                   |              | 02       | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 04         | 05   | 06   | 07   | 08   |
| Day                        |              | 15       | 15   | 15   | 15   | 15   | 14   | 14   | 14   | 22         | 22   | 22   | 25   | 25   |
| Item                       | Time<br>Z(m) | 0830     | 0710 | 0520 | 0330 | 0148 | 2045 | 1922 | 1748 | 1040       | 1150 | 1320 | 1000 | 1120 |
| O <sub>2</sub><br><br>cc/L | 0            | 5.25     | 5.15 | 5.09 | 5.27 | 5.17 | 5.13 | 5.30 | 4.95 | 5.94       | 6.06 | 5.86 | 5.79 | 5.75 |
|                            | 10           | 5.31     | 5.17 | 5.13 | 5.33 | 5.27 | 5.31 | 5.43 | 5.13 | 5.86       | 6.08 | 6.33 | 6.06 | 5.77 |
|                            | 20           | 5.39     | 5.30 | 5.35 | 5.05 | 5.23 | 5.35 | 5.47 | 5.15 | 5.97       | 6.08 | 5.77 | 5.77 | 5.75 |
|                            | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 30           | 5.01     | 5.35 | 5.25 | 4.97 | 5.07 | 5.12 | 5.35 | 4.92 | 5.96       | 6.24 | 5.87 | 5.88 | 5.75 |
|                            | 50           | 4.93     | 5.11 | 5.07 | 4.91 | 4.95 | 4.89 | 4.72 | 4.69 | —          | 6.22 | 5.87 | 5.78 | 5.69 |
|                            | 75           | —        | —    | —    | —    | 4.91 | 4.67 | —    | —    | —          | 6.29 | 5.91 | 5.88 | 5.67 |
|                            | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
| Botm.                      |              | 4.36     | 4.86 | 5.05 | 4.89 | 4.79 | 4.34 | 4.12 | 4.55 | 6.10       | 6.29 | 5.88 | 5.88 | 5.51 |
| pH                         | 0            | 7.72     | 7.50 | 7.80 | 7.66 | 7.85 | 7.88 | 7.63 | 7.83 | 8.04       | 8.10 | 8.00 | 8.01 | 8.09 |
|                            | 10           | 7.68     | 7.52 | 7.84 | 7.70 | 7.94 | 7.88 | 7.69 | 7.83 | 8.12       | 8.10 | 7.99 | 8.03 | 8.02 |
|                            | 20           | 7.60     | 7.56 | 7.79 | 7.70 | 7.90 | 7.90 | 7.90 | 7.91 | 8.10       | 7.92 | 7.99 | 8.05 | 8.10 |
|                            | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 30           | 7.58     | 7.63 | 7.68 | 7.65 | 7.90 | 7.95 | 7.97 | 8.00 | 8.10       | 8.01 | 7.91 | 8.03 | 8.10 |
|                            | 50           | 7.80     | 7.73 | 7.68 | 7.79 | 7.84 | 7.95 | 7.96 | 7.95 | —          | 8.00 | 8.06 | 8.02 | 8.13 |
|                            | 75           | —        | —    | —    | —    | 7.70 | 7.80 | —    | —    | —          | —    | —    | 8.02 | 8.13 |
|                            | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
| Botm.                      |              | 7.77     | 7.72 | 7.74 | 7.68 | 7.69 | 7.72 | 7.82 | 7.71 | 8.11       | 8.00 | 8.10 | 8.02 | 8.14 |
| PO -P<br><br>μg-at/L       | 0            | —        | —    | 0.24 | —    | —    | 0.08 | —    | —    | 0.38       | —    | 0.15 | 0.13 | 0.13 |
|                            | 10           | —        | —    | 0.27 | —    | —    | 0.10 | —    | —    | 0.40       | —    | 0.17 | 0.10 | 0.14 |
|                            | 20           | —        | —    | 0.27 | —    | —    | 0.20 | —    | —    | 0.36       | —    | 0.14 | 0.11 | 0.14 |
|                            | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 30           | —        | —    | 0.29 | —    | —    | 0.24 | —    | —    | —          | —    | 0.08 | 0.24 | 0.05 |
|                            | 50           | —        | —    | 0.20 | —    | —    | 0.29 | —    | —    | —          | —    | 0.05 | 0.24 | 0.29 |
|                            | 75           | —        | —    | —    | —    | —    | 0.41 | —    | —    | —          | —    | —    | —    | 0.12 |
|                            | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
|                            | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    | —    |
| Botm.                      |              | —        | —    | 0.50 | —    | —    | 0.43 | —    | —    | 0.40       | 1.10 | 0.13 | —    | —    |

# 311 선 해양 관측 성적

Oceanographic Data, Line 311

| Date                              |              | ① August |      |      |      |      |      | ② December |      |      |      |
|-----------------------------------|--------------|----------|------|------|------|------|------|------------|------|------|------|
| Sta. No.                          |              | 04       | 05   | 06   | 07   | 08   | 09   | 05         | 06   | 07   | 08   |
| Day                               |              | 17       | 17   | 19   | 19   | 19   | 19   | 22         | 22   | 22   | 22   |
| Item                              | Time<br>Z(m) | 1215     | 1338 | 1028 | 1235 | 1402 | 1530 | 0640       | 0520 | 0200 | 0030 |
| O <sub>2</sub><br><br>cc/L        | 0            | 5.25     | 5.47 | 5.07 | 5.13 | 5.08 | 5.13 | 6.17       | 5.90 | 5.75 | 5.98 |
|                                   | 10           | 5.33     | 5.19 | 5.11 | 5.25 | 5.30 | 5.05 | 5.06       | 5.80 | 5.75 | 5.98 |
|                                   | 20           | 5.35     | 5.05 | 5.11 | 5.29 | 5.43 | 5.27 | 5.08       | 5.78 | 5.75 | 5.92 |
|                                   | 25           | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 30           | —        | 5.01 | 5.01 | 5.31 | 5.35 | 5.29 | —          | 5.84 | 5.81 | 5.92 |
|                                   | 50           | —        | 4.71 | 4.79 | 5.13 | 4.91 | 5.11 | —          | 5.84 | 5.77 | 5.81 |
|                                   | 75           | —        | —    | —    | 5.03 | —    | —    | —          | —    | 5.73 | 4.97 |
|                                   | 100          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 125          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
| Botm.                             |              | 5.34     | 4.67 | 4.75 | 5.00 | 4.75 | 5.01 | 5.08       | 5.88 | 5.79 | 4.95 |
| pH                                | 0            | 7.65     | 7.61 | 7.50 | 7.69 | 7.79 | 7.70 | 8.12       | 8.10 | 8.02 | 8.10 |
|                                   | 10           | 7.62     | 7.61 | 7.50 | 7.62 | 7.74 | 7.71 | 8.02       | 8.10 | 8.10 | 8.18 |
|                                   | 20           | 7.60     | 5.58 | 7.67 | 7.62 | 7.82 | 7.79 | 8.02       | 8.08 | 8.12 | 8.18 |
|                                   | 25           | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 30           | —        | 7.61 | 7.67 | 7.69 | 7.80 | 7.68 | —          | 8.10 | 8.20 | 8.18 |
|                                   | 50           | —        | 7.59 | 7.61 | 7.65 | 7.60 | 7.59 | —          | 8.10 | 8.15 | 8.15 |
|                                   | 75           | —        | —    | —    | 7.65 | —    | —    | —          | —    | 8.12 | 8.10 |
|                                   | 100          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 125          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
| Botm.                             |              | 7.60     | 7.55 | 7.66 | 7.62 | 7.40 | 7.58 | 8.01       | 8.10 | 8.10 | 8.08 |
| PO <sub>4</sub> -P<br><br>μg-at/L | 0            | 0.24     | —    | —    | 0.14 | —    | —    | 0.44       | 0.57 | 0.68 | 1.08 |
|                                   | 10           | 0.29     | —    | —    | 0.20 | —    | —    | 1.44       | 0.70 | —    | 1.06 |
|                                   | 20           | 0.31     | —    | —    | 0.29 | —    | —    | 1.52       | 0.91 | 0.61 | 0.87 |
|                                   | 25           | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 30           | —        | —    | —    | 0.37 | —    | —    | 1.65       | 1.05 | 0.55 | 0.97 |
|                                   | 50           | —        | —    | —    | 0.44 | —    | —    | —          | 1.20 | 0.86 | 1.46 |
|                                   | 75           | —        | —    | —    | 0.47 | —    | —    | —          | —    | 0.99 | 1.46 |
|                                   | 100          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 125          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 150          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                                   | 200          | —        | —    | —    | —    | —    | —    | —          | —    | —    | —    |
| Botm.                             |              | 0.81     | —    | —    | 0.56 | —    | —    | 1.65       | 1.33 | 1.01 | 1.54 |

## 310선 해양관측성적

Oceanographic Data, Line 310

| Date               |       | ① August |      |      |      |      |      |      | ② December |      |
|--------------------|-------|----------|------|------|------|------|------|------|------------|------|
| Sta. No.           |       | 03       | 04   | 05   | 06   | 07   | 08   | 09   | 05         | 07   |
| Day                |       | 20       | 20   | 20   | 20   | 19   | 19   | 19   | 21         | 21   |
| Item               | Time  | 0435     | 0300 | 1030 | 0005 | 2230 | 2100 | 1925 | 1620       | 1840 |
|                    | Z(m)  |          |      |      |      |      |      |      |            |      |
| O <sub>2</sub>     | 0     | 5.05     | 5.05 | 5.07 | 5.11 | 5.09 | 4.87 | 5.07 | 6.39       | 5.84 |
|                    | 10    | 4.97     | 5.09 | 4.95 | 5.07 | 5.10 | 5.11 | 5.37 | 6.39       | 5.84 |
|                    | 20    | 4.95     | 5.12 | 4.95 | 4.99 | 4.92 | 5.07 | 5.25 | 5.98       | 5.75 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 30    | 4.91     | 5.02 | 4.77 | 4.95 | 4.68 | 4.63 | 5.09 | 6.00       | 5.67 |
|                    | 50    | —        | 4.89 | 4.71 | 4.87 | 4.57 | 4.55 | 4.87 | 5.98       | 5.65 |
|                    | 75    | —        | —    | —    | —    | —    | —    | 4.70 | —          | —    |
|                    | 100   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
| cc<br>L            | 200   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | Botm. | 4.71     | 4.75 | 4.78 | 4.79 | 4.31 | 4.46 | 4.02 | 5.96       | 5.65 |
| pH                 | 0     | 7.80     | 7.74 | 7.80 | 7.76 | 7.70 | 7.48 | 7.89 | 8.10       | 8.04 |
|                    | 10    | 7.73     | 7.76 | 7.79 | 7.76 | 7.70 | 7.76 | 7.88 | 8.10       | 8.08 |
|                    | 20    | 7.63     | 7.76 | 7.90 | 7.69 | 7.79 | 7.60 | 7.78 | 8.19       | 8.09 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 30    | 7.72     | 7.76 | 7.88 | 7.60 | 7.78 | 7.60 | 7.52 | 8.08       | 8.19 |
|                    | 50    | —        | 7.80 | 7.84 | 7.69 | 7.80 | 7.65 | 7.45 | 8.10       | 8.10 |
|                    | 75    | —        | —    | —    | —    | —    | —    | 7.40 | —          | —    |
|                    | 100   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
| PO <sub>4</sub> -P | 200   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | Botm. | 7.89     | 7.75 | 7.80 | 7.69 | 7.73 | 7.72 | 7.41 | 8.08       | 8.10 |
| μg-at/L            | 0     | —        | 0.16 | —    | —    | 0.18 | —    | —    | 0.51       | 1.03 |
|                    | 10    | —        | 0.20 | —    | —    | 0.24 | —    | —    | 0.91       | 0.76 |
|                    | 20    | —        | 0.22 | —    | —    | 0.27 | —    | —    | 0.49       | —    |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 30    | —        | 0.31 | —    | —    | 0.29 | —    | —    | 0.48       | 0.48 |
|                    | 50    | —        | 0.33 | —    | —    | 0.49 | —    | —    | 0.89       | 0.46 |
|                    | 75    | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 100   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
| μg-at/L            | 200   | —        | —    | —    | —    | —    | —    | —    | —          | —    |
|                    | Botm. | —        | 0.39 | —    | —    | 0.47 | —    | —    | 1.69       | 0.34 |

## 309선 해양관측성적

Oceanographic Data, Line 309

| Date               |              | ① August |      |      |      |      |      |      |      |      | ② December |      |      |      |
|--------------------|--------------|----------|------|------|------|------|------|------|------|------|------------|------|------|------|
| Sta. No.           |              | 01       | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   | 02         | 03   | 04   | 06   |
| Day                |              | 25       | 25   | 25   | 25   | 25   | 26   | 26   | 26   | 26   | 13         | 13   | 13   | 13   |
| Item               | Time<br>Z(m) | 1815     | 1920 | 2040 | 2215 | 2345 | 0125 | 0255 | 0430 | 0600 | 1710       | 1826 | 1940 | 2250 |
| O <sub>2</sub>     | 0            | 5.05     | 5.11 | 4.09 | 5.11 | 5.01 | 4.92 | 5.10 | 4.85 | 5.07 | 6.63       | 6.00 | 6.00 | 5.88 |
|                    | 10           | 5.13     | 5.01 | 5.13 | 5.05 | 4.97 | 4.85 | 5.13 | 4.97 | 5.05 | 6.07       | 6.00 | 6.19 | 5.90 |
|                    | 20           | —        | 4.99 | 5.05 | 5.05 | 4.81 | 4.81 | 4.87 | 5.01 | 4.99 | 6.14       | 6.00 | 6.08 | 5.88 |
|                    | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 30           | —        | —    | 4.97 | 5.03 | 4.77 | 4.67 | 4.85 | 4.81 | 4.88 | —          | 6.00 | 6.25 | 6.08 |
|                    | 50           | —        | —    | —    | —    | 4.68 | 4.36 | 4.70 | 4.67 | 4.68 | —          | —    | —    | 6.00 |
|                    | 75           | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
| Botm.              |              | 5.17     | 4.97 | 4.91 | 4.91 | 4.26 | 4.26 | 4.57 | 4.57 | 4.64 | 6.14       | 6.14 | 6.39 | 5.81 |
| pH                 | 0            | 7.98     | 7.90 | 7.96 | 7.90 | 7.86 | 7.80 | 7.92 | 7.97 | 7.90 | 8.00       | 8.20 | 8.05 | 7.91 |
|                    | 10           | 7.98     | 7.89 | 8.00 | 7.87 | 7.90 | 7.73 | 8.09 | 7.81 | 7.95 | 8.10       | 8.19 | 8.11 | 8.10 |
|                    | 20           | —        | 7.76 | 7.98 | 7.82 | 7.94 | 7.94 | 8.02 | 7.89 | 7.96 | 8.08       | 8.10 | 8.00 | 8.05 |
|                    | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 30           | —        | —    | 7.90 | 7.81 | 7.94 | 7.92 | 8.05 | 7.89 | 7.96 | —          | 8.12 | 7.90 | 7.98 |
|                    | 50           | —        | —    | —    | —    | 7.90 | 9.90 | 8.01 | 7.80 | 7.92 | —          | —    | —    | 7.89 |
|                    | 75           | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
| Botm.              |              | 7.72     | 7.90 | 7.88 | 7.80 | 7.82 | 7.90 | 8.00 | 7.80 | 7.80 | 8.09       | 8.12 | 7.90 | 7.89 |
| PO <sub>4</sub> -P | 0            | —        | —    | —    | 0.14 | —    | —    | 0.14 | —    | —    | 0.65       | 0.13 | 0.10 | 1.25 |
|                    | 10           | —        | —    | —    | 0.16 | —    | —    | 0.18 | —    | —    | —          | 0.80 | —    | 1.37 |
|                    | 20           | —        | —    | —    | 0.22 | —    | —    | 0.20 | —    | —    | 0.19       | 0.68 | —    | 0.76 |
|                    | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 30           | —        | —    | —    | 0.27 | —    | —    | 0.24 | —    | —    | —          | 0.70 | 0.34 | 0.70 |
|                    | 50           | —        | —    | —    | —    | —    | —    | 0.33 | —    | —    | —          | —    | —    | —    |
|                    | 75           | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
|                    | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    | —          | —    | —    | —    |
| Botm.              |              | —        | —    | —    | 0.37 | —    | —    | 0.37 | —    | —    | 0.19       | 1.46 | 0.36 | 0.74 |

# 308선 해양관측성적

## Oceanographic Data, Line 308

| Date               |              | ① August |      |      |      |      |      |      |      |      |  | ② December |      |      |      |
|--------------------|--------------|----------|------|------|------|------|------|------|------|------|--|------------|------|------|------|
| Sta. No.           |              | 01       | 02   | 03   | 04   | 05   | 06   | 07   | 08   | 09   |  | 04         | 06   | 07   | 08   |
| Day                |              | 26       | 26   | 26   | 26   | 26   | 26   | 26   | 26   | 26   |  | 10         | 9    | 9    | 9    |
| Item               | Time<br>Z(m) | 2125     | 1935 | 1825 | 1703 | 1535 | 1359 | 1230 | 1045 | 0915 |  | 0035       | 2200 | 1925 | 1800 |
| O <sub>2</sub>     | 0            | 5.13     | 5.10 | 4.99 | 4.95 | 5.05 | 5.05 | 5.23 | 4.85 | 5.07 |  | 6.29       | 6.31 | 6.24 | 6.31 |
|                    | 10           | 5.07     | 5.07 | 4.77 | 4.89 | 5.13 | 5.07 | 5.25 | 5.13 | 5.15 |  | 5.90       | 6.28 | 6.29 | 6.41 |
|                    | 20           | —        | 5.17 | 4.95 | 4.93 | 5.08 | 5.03 | 5.05 | 4.91 | 5.25 |  | 5.90       | 6.23 | 6.22 | 6.38 |
|                    | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 30           | —        | —    | 4.88 | 4.77 | 4.97 | 5.01 | 5.13 | 4.70 | 5.09 |  | 5.88       | 6.04 | 6.17 | 6.25 |
|                    | 50           | —        | —    | —    | —    | —    | 4.97 | 4.95 | 4.67 | 4.91 |  | —          | —    | —    | 5.35 |
|                    | 75           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
| Botm.              |              | 5.17     | 5.11 | 4.73 | 4.64 | 4.95 | 4.91 | 4.91 | 4.63 | 4.87 |  | 5.88       | 5.48 | 5.26 | 4.76 |
| pH                 | 0            | 8.02     | 8.06 | 7.72 | 8.01 | 7.72 | 8.09 | 8.00 | 7.81 | 7.80 |  | 7.90       | 7.90 | 7.90 | 8.01 |
|                    | 10           | 7.99     | 7.89 | 8.06 | —    | 7.72 | 7.82 | 8.00 | 7.94 | 7.86 |  | 7.92       | 7.96 | 8.01 | 7.85 |
|                    | 20           | —        | 7.80 | 7.98 | 7.90 | 7.76 | 7.90 | 8.00 | 8.20 | 7.86 |  | 7.91       | 8.04 | 8.10 | 7.96 |
|                    | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 30           | —        | —    | 7.90 | 7.89 | 7.85 | 7.92 | 7.92 | 8.36 | 7.90 |  | 8.03       | 8.06 | 8.11 | 8.04 |
|                    | 50           | —        | —    | —    | —    | —    | 7.92 | 7.90 | 8.00 | 7.85 |  | —          | —    | —    | 8.00 |
|                    | 75           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
| Botm.              |              | 7.89     | 7.80 | 7.85 | 7.78 | 7.87 | 7.89 | 7.91 | 8.01 | 7.81 |  | 8.06       | 7.84 | 8.08 | 7.88 |
| PO <sub>4</sub> -P | 0            | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | 1.24       | 1.10 | 0.91 | 0.74 |
|                    | 10           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | 0.72       | 0.72 | 1.16 | 0.80 |
|                    | 20           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | 0.46       | 0.86 | 1.33 | —    |
|                    | 25           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 30           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | 0.46       | —    | 0.63 | —    |
|                    | 50           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 75           | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 100          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 125          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 150          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
|                    | 200          | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | —          | —    | —    | —    |
| Botm.              |              | —        | —    | —    | —    | —    | —    | —    | —    | —    |  | 0.57       | 0.93 | 1.60 | 1.31 |

# 307선 해양관측성적

Oceanographic Data, Line 307

| Date               |       | ① August |      |      |      |      |      |      | ② December |      |      |
|--------------------|-------|----------|------|------|------|------|------|------|------------|------|------|
| Sta. No.           |       | 03       | 04   | 05   | 06   | 07   | 08   | 09   | 04         | 06   | 07   |
| Day                |       | 27       | 27   | 27   | 27   | 27   | 27   | 27   | 9          | 9    | 9    |
| Item               | Time  | 0138     | 0415 | 0555 | 0810 | 0935 | 1050 | 1245 | 0810       | 1030 | 1148 |
|                    |       |          |      |      |      |      |      |      |            |      |      |
| O <sub>2</sub>     | 0     | 5.03     | 5.09 | 4.85 | 5.09 | 4.95 | 5.17 | 5.05 | 6.27       | 6.21 | 6.31 |
|                    | 10    | 5.03     | 5.14 | 4.91 | 4.89 | 4.85 | 5.43 | 5.07 | 6.23       | 6.27 | 6.29 |
|                    | 20    | 5.30     | 4.93 | 5.07 | 5.10 | 4.77 | 5.27 | 5.17 | 6.21       | 6.24 | 6.28 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 30    | 5.49     | —    | 4.95 | 4.91 | 4.44 | 5.33 | 5.01 | —          | 6.18 | 6.10 |
|                    | 50    | —        | —    | —    | —    | —    | 5.11 | 4.71 | —          | —    | —    |
|                    | 75    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 100   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
| cc/L               | 200   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | Botm. | 4.95     | 5.07 | 4.88 | 5.13 | 4.12 | 5.09 | 4.61 | 6.19       | 6.08 | 5.86 |
| pH                 | 0     | 7.82     | 7.96 | 7.78 | 7.66 | 7.73 | 7.91 | 7.73 | 8.02       | 8.10 | 7.92 |
|                    | 10    | 7.89     | 7.88 | 7.79 | 7.65 | 7.92 | 7.91 | 7.88 | 8.00       | 8.90 | 7.97 |
|                    | 20    | 7.88     | 7.82 | 7.80 | 7.72 | 7.90 | 7.88 | 7.75 | 8.00       | 8.03 | 8.02 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 30    | 7.92     | —    | 7.81 | 7.72 | 7.89 | 7.76 | 7.68 | —          | 8.07 | 7.94 |
|                    | 50    | —        | —    | —    | —    | —    | 7.72 | 7.69 | —          | —    | —    |
|                    | 75    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 100   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
| PO <sub>4</sub> -P | 200   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | Botm. | 7.98     | 7.80 | 7.72 | 7.61 | 7.88 | 7.70 | 7.59 | 7.98       | 8.10 | 7.72 |
| μg-at/L            | 0     | —        | —    | —    | —    | —    | —    | —    | 0.29       | 0.99 | 0.82 |
|                    | 10    | —        | —    | —    | —    | —    | —    | —    | 0.68       | 0.76 | 0.76 |
|                    | 20    | —        | —    | —    | —    | —    | —    | —    | 0.67       | 0.76 | 0.76 |
|                    | 25    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 30    | —        | —    | —    | —    | —    | —    | —    | —          | 0.78 | 0.99 |
|                    | 50    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 75    | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 100   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 125   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | 150   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
| μg-at/L            | 200   | —        | —    | —    | —    | —    | —    | —    | —          | —    | —    |
|                    | Botm. | —        | —    | —    | —    | —    | —    | —    | 1.27       | 1.05 | 1.10 |



# 306선 해양관측성적

## Oceanographic Data, Line 306

| Date               |              | ① August |      |      |      |      |      | ② December |
|--------------------|--------------|----------|------|------|------|------|------|------------|
| Sta. No.           |              | 04       | 05   | 06   | 07   | 08   | 09   | 04         |
| Day                |              | 27       | 27   | 27   | 27   | 27   | 27   | 8          |
| Item               | Time<br>Z(m) | 2245     | 2055 | 1930 | 1800 | 1630 | 1500 | 1650       |
| O <sub>2</sub>     | 0            | 5.09     | 5.07 | 5.05 | 4.11 | 5.07 | 5.07 | 6.31       |
|                    | 10           | 4.79     | 5.19 | 5.11 | 5.13 | 5.05 | 4.85 | 6.35       |
|                    | 20           | 4.83     | —    | 5.15 | 4.97 | 5.13 | 4.75 | —          |
|                    | 25           | —        | —    | —    | —    | —    | —    | —          |
|                    | 30           | —        | —    | 4.79 | 4.93 | 4.99 | 4.91 | —          |
|                    | 50           | —        | —    | —    | 4.90 | 4.95 | 5.01 | —          |
|                    | 75           | —        | —    | —    | —    | —    | —    | —          |
|                    | 100          | —        | —    | —    | —    | —    | —    | —          |
|                    | 125          | —        | —    | —    | —    | —    | —    | —          |
|                    | 150          | —        | —    | —    | —    | —    | —    | —          |
| cc/L               | 200          | —        | —    | —    | —    | —    | —    | —          |
|                    | Botm.        | 4.63     | 5.05 | 4.75 | 4.61 | 4.91 | 4.85 | 6.37       |
| pH                 | 0            | 7.86     | 7.94 | 7.70 | 7.68 | 7.75 | 7.59 | 8.02       |
|                    | 10           | 7.83     | 7.96 | 7.74 | 7.73 | 7.75 | 7.70 | 8.01       |
|                    | 20           | 7.72     | —    | 7.81 | 7.82 | 7.72 | 7.70 | —          |
|                    | 25           | —        | —    | —    | —    | —    | —    | —          |
|                    | 30           | —        | —    | 7.82 | 7.82 | 7.70 | 7.68 | —          |
|                    | 50           | —        | —    | —    | 7.88 | 7.90 | 7.70 | —          |
|                    | 75           | —        | —    | —    | —    | —    | —    | —          |
|                    | 100          | —        | —    | —    | —    | —    | —    | —          |
|                    | 125          | —        | —    | —    | —    | —    | —    | —          |
|                    | 150          | —        | —    | —    | —    | —    | —    | —          |
| PO <sub>4</sub> -P | 200          | —        | —    | —    | —    | —    | —    | —          |
|                    | Botm.        | 7.70     | 7.99 | 7.87 | 7.84 | 7.80 | 7.73 | 8.01       |
| μg-at/L            | 0            | —        | —    | —    | —    | —    | —    | 0.76       |
|                    | 10           | —        | —    | —    | —    | —    | —    | —          |
|                    | 20           | —        | —    | —    | —    | —    | —    | —          |
|                    | 25           | —        | —    | —    | —    | —    | —    | —          |
|                    | 30           | —        | —    | —    | —    | —    | —    | —          |
|                    | 50           | —        | —    | —    | —    | —    | —    | —          |
|                    | 75           | —        | —    | —    | —    | —    | —    | —          |
|                    | 100          | —        | —    | —    | —    | —    | —    | —          |
|                    | 125          | —        | —    | —    | —    | —    | —    | —          |
|                    | 150          | —        | —    | —    | —    | —    | —    | —          |
| μg-at/L            | 200          | —        | —    | —    | —    | —    | —    | —          |
|                    | Botm.        | —        | —    | —    | —    | —    | —    | 0.84       |

# 제 4 편

## 부 유 생 물 조 사 성 적



### PART 4

### BIOLOGICAL DATA

1965





## 차 례

|                       |     |
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## 부유생물의 채집과 검색

本院 및 海區試驗所에서 海洋觀測時 採集한 資料를 檢索調査한 結果는 다음과 같다.

### 1. 採集網 및 方法

採集網은 Marutoku B type Plankton Net 및 Norpac net를 使用하여 定量 採集하였으며 採集 水層은 大部分 150m와 50m에서 表面까지 垂直 採集하였고 얇은 곳에서는 底層에서 表面까지 1m/sec의 速度로서 垂直 採集하여 3~5%의 中性ホルマリン으로 固定하였다.

### 2. 採集된 試料의 處理方法

上記 Net로써 採集한 試料에 對해서 大型인 水母類 및 大型 甲殼類를 除去하고 濕重量을 測定한 後 標本分割器로써 等分割하여 分割한 그 一部分를 摘出하여 顯微鏡下에서 檢索計數하였다.

但, 一部 檢索되지 않는 資料는 沈澱量 및 濕重量에 依한 Biomass 만을 測定하였으며 그 資料는 保管하였다.

## Collecting procedures and equipment

Plankton samples were collected at the hydrographic stations of the sectional lines made in the adjacent waters of Korea. The methods applied for collecting and treating the samples and the gears used are as follows.

### 1. Net and collecting procedures

Marutoku B type net and Norpac net were employed for collecting the plankton organisms. Method of hauling is vertical, general depth of haul is from an estimated depth of 150 or 50 meters to the surface, and speed of hauling is approximately one meter per second. The samples obtained from the net were preserved with three-five percent neutral Formalin in the preserving glass bottle and taken to the laboratory for determinations.

### 2. Laboratory procedures

For determining quantity of plankton the wet-weight measurements were employed in removing larger planktons such as Hydromedusae, Scyphomedusae and Doliolum. In separating the plankton the subsamples were made by whirling apparatus, and the species were counted under the microscope.

Remark: Some samples were measured in settling volumes and in biomass only.

동 해 부 유 생 물 조 사 성 적

PLANKTON DATA

EASTERN WATERS

1 9 6 5



# A. 107 선 부유생물조사표

## Plankton Data, Line 107

| Month                            | Feb. |      | Apr.  |       |       |
|----------------------------------|------|------|-------|-------|-------|
| Station                          | 01   | 03   | 01    | 03    | 05    |
| Date                             | 19   | 19   | 14    | 14    | 15    |
| Time                             | 0805 | 1015 | 1800  | 2025  | 0005  |
| Collected depth(m)               | 50   | 50   | 50    | 50    | 50    |
| Volume(cc)                       | 11.0 | 14.0 | 10.0  | 10.0  | 12.0  |
| Biomass(mg/m <sup>3</sup> )      | 35.5 | 44.3 | 245.9 | 239.4 | 293.4 |
| Rate of subsample                | 1/8  | 1/8  | 1/64  | 1/32  | 1/32  |
| No. of total organisms           | 303  | 375  | 252   | 276   | 316   |
| No. of total the other organisms | —    | —    | —     | —     | —     |
| <b>ZOOPLANKTON</b>               |      |      |       |       |       |
| <i>Calanus helgolandicus</i>     | 1    |      |       |       |       |
| <i>Calanus tenuicornis</i>       | 1    |      | 2     | 7     | 10    |
| <i>Calanus plumchrus</i>         |      | 17   |       | 15    | 14    |
| <i>Calanus larva</i>             | 4    | 33   | 3     | 10    | 3     |
| <i>Eucalanus larva</i>           |      | 2    |       |       |       |
| <i>Paracalanus parvus</i>        |      | 9    | 11    | 15    | 2     |
| <i>Paracalanus aculeatus</i>     |      |      |       | 2     |       |
| <i>Clausocalanus pergens</i>     |      |      |       | 37    | 7     |
| <i>Ctenocalanus vanus</i>        |      |      |       |       | 10    |
| <i>Pseudocalanus minutus</i>     | 144  | 42   | 114   | 62    | 88    |
| <i>Pseudocalanus minutus juv</i> |      |      | 36    |       | 20    |
| <i>Scolecithricella minor</i>    |      | 2    |       | 2     | 2     |
| <i>Metridia lucens</i>           |      |      | 4     | 6     | 27    |
| <i>Metridia lucens juv</i>       |      |      | 1     | 6     | 67    |
| <i>Oithona plumifera</i>         | 145  | 246  | 25    | 7     | 20    |
| <i>Oithona nana</i>              |      |      | 20    | 48    |       |
| <i>Oithona larva</i>             |      |      | 13    |       |       |
| <i>Oithona sp</i>                |      |      |       | 19    | 11    |
| <i>Oncaea venusta</i>            |      | 1    |       |       |       |
| <i>Oncaea sp</i>                 |      |      | 1     |       |       |
| <i>Copepoda larva</i>            |      | 14   | 17    | 12    | 25    |
| <i>Copepoda sp</i>               | 2    |      |       | 22    |       |
| <i>Oikopleura sp</i>             | 3    | 6    |       | 2     |       |
| <i>Polychaeta larva</i>          |      |      |       | 1     |       |
| <i>Pelegic egg</i>               |      |      |       |       | 2     |
| <i>Shell larva</i>               |      |      |       |       | 1     |
| <i>Parathemisto sp</i>           | 1    |      | 4     | 1     | 3     |
| <i>Euphausia larva</i>           |      |      |       | 1     | 2     |
| <i>Sagitta sp</i>                | 2    | 3    | 1     | 1     | 2     |



## B. 106선 부유생물조사표

## Plankton Data, Line 106

| Month                              | Feb.  |      | Apr.  |      |       | Aug. |       | Sep. |      |      |       |
|------------------------------------|-------|------|-------|------|-------|------|-------|------|------|------|-------|
| Station                            | 02    | 04   | 02    | 04   | 06    | 11   | 13    | 03   | 05   | 07   | 09    |
| Date                               | 19    | 19   | 15    | 15   | 15    | 31   | 30    | 2    | 1    | 1    | 1     |
| Time                               | 1930  | 1525 | 1410  | 1215 | 0745  | 0320 | 2030  | 0410 | 2230 | 1610 | 1015  |
| Collected depth(m)                 | 50    | 50   | 30    | 50   | 50    | 150  | 150   | 140  | 150  | 150  | 150   |
| Volume(cc)                         | 10.0  | 0.2  | 7.0   | 3.0  | 12.0  | 12.0 | 18.0  | 2.0  | 3.0  | 3.0  | 25.0  |
| Biomass(mg/m <sup>3</sup> )        | 141.9 | 4    | 206.8 | 78   | 323.7 | 81.3 | 167.5 | 27.5 | 40.3 | 31.2 | 149.8 |
| Rate of subsample                  | 1/32  | 1    | 1/16  | 1/3  | 1/16  | 1/16 | 1/32  | 1/2  | 1/4  | 1/4  | 1/4   |
| No. of total organisms             | 212   | 95   | 268   | 229  | 243   | 854  | 763   | 549  | 471  | 608  | 476   |
| No. of total the other organisms   | —     | —    | —     | —    | —     | —    | —     | —    | —    | —    | —     |
| <b>ZOOPLANKTON</b>                 |       |      |       |      |       |      |       |      |      |      |       |
| <i>Calanus helgolandicus</i>       |       |      | 1     | 2    |       | 20   | 12    | 15   | 1    | 6    | 4     |
| <i>Calanus helgolandicus</i> juv   |       |      |       |      |       | 3    |       |      | 3    |      |       |
| <i>Calanus tenuicornis</i>         |       |      | 13    | 3    |       |      | 35    | 1    | 1    | 28   | 2     |
| <i>Calanus tenuicornis</i> juv     |       |      |       |      |       |      | 13    |      |      |      |       |
| <i>Calanus plumchrus</i>           |       |      |       | 8    | 14    |      | 3     | 14   | 1    | 7    |       |
| <i>Undinula darwinii</i>           |       |      |       |      |       |      |       |      |      |      | 2     |
| <i>Calanus robustior</i>           |       |      |       |      |       | 1    | 1     | 2    | 12   | 3    |       |
| <i>Calanus robustior</i> juv       |       |      |       |      | 5     |      |       |      |      |      |       |
| <i>Calanus larva</i>               | 7     |      |       | 11   | 4     | 13   | 15    |      | 9    | 15   | 5     |
| <i>Calanus</i> sp                  |       |      |       |      |       |      |       | 4    |      |      |       |
| <i>Eucalanus larva</i>             |       |      |       |      |       | 10   |       |      |      |      | 11    |
| <i>Paracalanus parvus</i>          | 24    | 32   | 10    | 37   | 2     | 368  | 409   | 295  | 140  | 82   | 96    |
| <i>Paracalanus aculeatus</i>       |       |      |       |      |       |      | 3     |      | 1    |      |       |
| <i>Paracalanus larva</i>           |       |      | 1     |      |       |      |       |      |      |      |       |
| <i>Acrocalanus sp</i>              |       |      |       |      |       | 1    |       |      |      |      |       |
| <i>Clausocalanus pargens</i>       |       |      | 3     | 41   | 5     | 29   | 60    | 8    | 25   | 32   | 12    |
| <i>Clausocalanus arcuicornis</i>   |       |      |       |      |       |      |       |      |      |      | 4     |
| <i>Ctenocalanus vanus</i>          |       |      | 43    | 5    |       | 21   | 1     | 1    |      | 2    | 10    |
| <i>Pseudocalanus gracilis</i>      |       |      |       |      |       |      |       | 1    |      |      |       |
| <i>Pseudocalanus minutus</i>       | 119   | 7    | 135   | 39   | 106   | 2    | 8     | 5    | 42   | 70   | 4     |
| <i>Pseudocalanus minutus</i> juv   |       |      |       | 21   | 49    |      |       |      |      |      |       |
| <i>Pareuchaeta elongata</i>        |       |      |       |      |       |      |       |      | 2    |      |       |
| <i>Euchaeta larva</i>              |       |      |       |      |       |      |       |      |      | 5    |       |
| <i>Scolecithricella minor</i>      |       |      |       |      | 1     |      | 3     | 5    | 15   | 43   | 2     |
| <i>Scolecithricella orientalis</i> |       |      |       |      |       |      | 1     |      |      |      |       |
| <i>Scolecithricella larva</i>      |       |      |       |      |       |      |       |      |      | 11   |       |
| <i>Centropages bradyi</i>          |       |      |       |      |       | 2    |       |      |      |      |       |
| <i>Centropages larva</i>           |       |      |       |      |       | 1    |       |      |      |      |       |
| <i>Metridia pacifica</i>           |       |      |       |      |       | 4    | 5     | 22   | 18   | 5    |       |
| <i>Metridia larva</i>              |       |      |       |      | 1     | 4    | 7     | 15   | 15   | 22   | 3     |
| <i>Lucicutia flavicornis</i>       |       |      |       |      |       | 1    |       |      |      |      |       |
| <i>Candacia bipinnata</i>          |       |      |       |      |       | 1    |       |      |      |      |       |
| <i>Candacia pectinata</i>          |       |      |       |      |       |      |       |      |      |      | 1     |
| <i>Labidocera japonica</i>         |       |      |       |      |       |      | 5     |      |      | 1    |       |
| <i>Labidocera larva</i>            |       |      |       |      |       |      |       |      |      | 1    |       |
| <i>Acartia clausi</i>              |       |      |       | 2    |       | 16   | 4     |      |      |      | 6     |
| <i>Acartia larva</i>               |       |      |       |      |       |      |       |      |      | 2    |       |
| <i>Oithona plumifera</i>           | 39    | 28   | 7     | 3    | 1     | 55   | 24    | 43   | 39   | 108  | 90    |
| <i>Oithona nana</i>                |       |      | 19    | 222  | 32    |      |       |      |      |      |       |
| <i>Oithona</i> sp                  |       |      |       |      |       |      | 7     | 11   | 16   | 31   | 7     |
| <i>Tigriopus japonicus</i>         |       |      |       |      |       |      |       | 3    |      |      |       |
| <i>Oncaea venusta</i>              |       |      |       |      |       | 39   | 4     | 1    |      | 3    | 34    |
| <i>Corycaeus affinis</i>           | 1     |      |       |      |       | 9    | 6     | 1    |      | 1    | 9     |
| <i>Corycaeus gibbulus</i>          |       |      |       |      |       |      |       |      |      |      | 1     |
| <i>Copepoda larva</i>              | 2     |      | 31    | 25   | 18    | 25   | 9     |      | 22   | 25   | 5     |
| <i>Copepoda</i> sp                 |       | 1    |       |      |       |      |       | 8    |      |      |       |



| Month                            | Feb.  |      | Apr.  |      |       | Aug. |       | Sep. |      |      |       |
|----------------------------------|-------|------|-------|------|-------|------|-------|------|------|------|-------|
| Station                          | 02    | 04   | 02    | 04   | 06    | 11   | 13    | 03   | 05   | 07   | 09    |
| Date                             | 19    | 19   | 15    | 15   | 15    | 31   | 30    | 2    | 1    | 1    | 1     |
| Time                             | 1930  | 1525 | 1410  | 1215 | 0745  | 0320 | 2030  | 0410 | 2230 | 1620 | 1015  |
| Collected depth(m)               | 50    | 50   | 30    | 50   | 50    | 150  | 150   | 140  | 150  | 150  | 150   |
| Volume(cc)                       | 10.0  | 0.2  | 7.0   | 3.0  | 12.0  | 12.0 | 18.0  | 2.0  | 3.0  | 3.0  | 25.0  |
| Biomass(mg/m <sup>3</sup> )      | 141.9 | 4    | 206.8 | 78   | 323.7 | 81.3 | 167.5 | 27.5 | 40.3 | 31.2 | 149.8 |
| Rate of subsample                | 1/32  | 1    | 1/16  | 1/8  | 1/16  | 1/16 | 1/32  | 1/2  | 1/4  | 1/4  | 1/4   |
| No. of total organisms           | 212   | 95   | 268   | 229  | 243   | 854  | 768   | 549  | 471  | 608  | 476   |
| No. of total the other organisms | —     | —    | —     | —    | —     | —    | —     | —    | —    | —    | —     |

# ZOOPLANKTON

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|---------------------------|---|----|---|---|---|----|----|----|----|----|----|
| Oikopleura larva          |   |    |   |   |   |    |    |    |    | 7  |    |
| Oikopleura sp             | 3 | 17 | 2 | 2 | 2 | 94 | 12 | 35 | 32 | 9  | 17 |
| Penilia schmackeri        |   |    |   |   |   | 3  | 5  | 4  |    |    | 65 |
| Eudne tergestina          |   |    |   |   |   | 27 | 1  | 7  |    |    | 35 |
| Conchoecia elegans        |   |    |   |   |   | 1  | 9  |    |    |    | 3  |
|                           |   |    |   |   |   |    |    |    |    |    | 34 |
| Noctiluca scintillans     |   |    |   |   |   |    |    |    |    |    |    |
| Polychaeta larva          |   |    |   |   |   | 1  |    |    |    |    |    |
| Polychaeta sp             | 1 |    |   |   |   | 1  |    | 7  |    |    |    |
| Engraulis japonicus larva |   |    |   |   |   |    |    |    |    |    |    |
| Ophiopluteus sp           | 1 |    |   |   |   |    |    |    |    |    |    |
| Fish larva                |   |    |   |   |   | 6  | 1  |    |    |    |    |
| Fish egg                  |   |    |   |   |   | 1  |    |    |    |    |    |
| Pelagic egg               | 1 |    |   |   |   |    |    |    |    | 6  |    |
| Hyperia galba             |   |    |   |   |   | 1  | 11 |    |    |    |    |
| Hyperoche medusarum       |   |    |   |   |   |    |    | 12 |    |    |    |
| Hyperia sp                |   |    |   |   |   | 1  | 11 |    |    |    |    |
| Themisto gracilipes       |   |    |   |   |   | 12 | 51 |    | 32 | 20 |    |
| Parathemisto sp           | 5 | 2  | 3 | 5 | 3 |    | 1  |    | 1  |    |    |
| Primno macropa            |   |    |   |   |   |    |    |    | 1  |    |    |
| Phrosina semilunata       |   |    |   |   |   |    |    |    |    |    |    |
| Amphipoda larva           |   |    |   |   |   | 7  | 13 | 6  | 20 |    |    |
| Amphipoda sp              |   |    |   |   |   |    |    |    | 2  |    |    |
| Euphausia larva           |   |    |   |   |   | 2  | 4  | 3  |    |    | 3  |
| Euphausia sp              | 1 |    |   |   |   |    |    |    |    | 1  |    |
| Meterythropus robusta     |   |    |   |   |   |    |    |    | 2  |    |    |
| Lucifer raynaudii         |   |    |   |   |   | 1  |    |    |    |    | 1  |
| Brachyura larva           |   | 1  |   |   |   |    |    |    |    |    |    |
| Aglaurea hemistoma        |   |    |   |   |   |    |    |    | 3  |    |    |
| Salpa sp                  |   |    |   |   |   |    |    |    | 7  |    |    |
| Doliioletta gegenbauri    |   |    |   |   |   |    |    | 1  |    |    |    |
| Pteropoda larva           |   |    |   |   |   |    |    |    |    |    |    |
| Sagitta elegans           |   |    |   |   |   |    |    |    |    | 4  | 3  |
| Sagitta pulchra           |   |    |   |   |   | 3  |    | 3  |    | 1  |    |
| Sagitta larva             |   |    |   |   |   |    |    |    |    |    | 1  |
|                           |   |    |   |   |   | 25 | 6  | 16 | 1  | 45 |    |
| Sagitta sp                | 8 | 7  |   |   |   | 42 |    |    |    |    |    |



# C. 105 선 부유생물조사표

## Plankton Data, Line 105

| Month                            | February |      |       |      | April |      |
|----------------------------------|----------|------|-------|------|-------|------|
| Station                          | 03       | 05   | 07    | 09   | 03    | 05   |
| Date                             | 23       | 23   | 23    | 23   | 16    | 16   |
| Time                             | 0900     | 1115 | 1545  | 2040 | 1700  | 1830 |
| Collected depth(m)               | 50       | 50   | 50    | 50   | 50    | 50   |
| Volume(cc)                       | 0.8      | 0.1  | 0.1   | 3.5  | 3.0   | 2.5  |
| Biomass(mg/m <sup>3</sup> )      | 14.2     | 3    | 0.037 | 86.9 | 70.7  | 70.8 |
| Rate of subsample                | 1/4      | 1    | 1     | 1/4  | 1/16  | 1/32 |
| No. of total organisms           | 290      | 248  | 162   | 77   | 519   | 302  |
| No. of total the other organisms | —        | —    | —     | —    | —     | —    |

### ZOOPLANKTON

|                             |     |    |    |    |     |    |
|-----------------------------|-----|----|----|----|-----|----|
| Calanus helgolandicus       |     | 1  |    |    |     | 2  |
| Calanus helgolandicus juv   |     |    |    |    |     |    |
| Calanus minor               |     |    |    |    |     |    |
| Calanus tenuicornis         | 1   | 2  |    |    |     | 1  |
| Calanus tenuicornis juv     |     |    |    |    | 7   | 6  |
| Calanus plumchrus           |     |    |    |    |     |    |
| Calanus plumchrus juv       |     |    |    |    | 1   |    |
| Undinula darwinii           |     |    |    |    |     |    |
| Calanus larva               | 13  | 12 |    |    | 1   | 1  |
| Eucalanus crassus           |     |    |    |    |     |    |
| Eucalanus larva             |     |    |    |    |     |    |
| Paracalanus parvus          | 11  | 87 | 3  | 7  | 67  | 27 |
| Paracalanus aculeatus       |     | 3  |    |    |     |    |
| Acrocalanus gracilis        |     |    |    |    |     |    |
| Calocalanus plumulosus      |     |    |    |    |     |    |
| Clausocalanus pergens       |     |    |    |    | 5   | 12 |
| Ctenocalanus vanus          |     |    |    | 7  | 3   | 2  |
| Pseudocalanus minutus       | 221 | 22 | 15 | 2  | 112 | 75 |
| Pseudocalanus minutus juv   |     |    |    |    | 73  | 60 |
| Pseudocalanus gracilis      |     |    |    |    |     |    |
| Pseudocalanus larva         |     |    |    |    |     |    |
| Pareuchaeta elongata        |     |    |    |    |     |    |
| Euchaeta media              |     |    |    |    |     |    |
| Euchaeta larva              |     |    |    |    |     |    |
| Euchaeta sp                 |     | 1  |    |    |     |    |
| Scolecithricella minor      |     |    |    |    | 1   |    |
| Centropages bradyi          |     |    |    |    |     |    |
| Centropages abdominalis     |     |    |    |    |     | 8  |
| Centropages abdominalis juv |     |    |    |    |     | 5  |
| Centropages larva           |     |    | 1  |    |     |    |
| Centropages sp              |     | 1  |    |    |     |    |
| Metridia lucens             |     |    |    | 16 |     |    |
| Metridia lucens juv         |     |    |    |    | 2   |    |
| Metridia larva              |     |    |    |    |     | 3  |
| Lucicutia flavicornis       |     |    |    |    |     |    |
| Candacia bipinnata          |     |    |    |    |     |    |
| Labidocera japonica         |     |    |    |    |     |    |
| Labidocera sp               |     |    |    |    |     |    |
| Acartia clausi              |     |    |    |    | 1   | 1  |
| Acartia larva               | 1   | 2  |    |    |     |    |
| Tortanus discaudatus        |     |    |    |    |     |    |
| Oithona plumifera           | 30  | 56 | 2  | 17 | 12  | 1  |
| Oithona fallax              |     |    |    |    |     |    |
| Oithona rigida              |     |    |    |    |     |    |
| Oithona nana                |     |    |    |    | 215 | 55 |

| April |       |       | August |      |       |      |      |      |
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| 07    | 09    | 11    | 03     | 05   | 07    | 09   | 11   | 13   |
| 16    | 17    | 17    | 28     | 28   | 28    | 29   | 30   | 30   |
| 2245  | 0255  | 0650  | 0930   | 1235 | 2010  | 0210 | 1130 | 1650 |
| 50    | 50    | 50    | 60     | 150  | 150   | 110  | 150  | 150  |
| 10.0  | 15.0  | 5.0   | 10     | 6.0  | 22.0  | 20.0 | 7.0  | 16.0 |
| 42.9  | 11.23 | 102.9 | 3.8    | 84.5 | 214.6 | 134  | 59.1 | 97   |
| 1/32  | 1/64  | 1/16  | 1      | 1/16 | 1/32  | 1/32 | 1/16 | 1/32 |
| 556   | 223   | 197   | 495    | 593  | 764   | 1209 | 841  | 620  |
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|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
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|       |       |       |        |      |       |      |      |      |
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|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
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|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
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|       |       |       |        |      |       |      |      |      |
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|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |
|       |       |       |        |      |       |      |      |      |

| Month                            | February |      |       |      | April |      |
|----------------------------------|----------|------|-------|------|-------|------|
| Station                          | 03       | 05   | 07    | 09   | 03    | 05   |
| Date                             | 23       | 23   | 23    | 23   | 16    | 16   |
| Time                             | 0900     | 1115 | 1545  | 2040 | 1700  | 1830 |
| Collected depth(m)               | 50       | 50   | 50    | 50   | 50    | 50   |
| Volume(cc)                       | 0.8      | 0.1  | 0.1   | 3.1  | 3.0   | 2.5  |
| Biomass(mg/m <sup>3</sup> )      | 14.2     | 3    | 0.037 | 86.9 | 70.7  | 70.8 |
| Rate of subsample                | 1/4      | 1    | 1     | 1/4  | 1/16  | 1/32 |
| No. of total organisms           | 250      | 248  | 162   | 77   | 512   | 302  |
| No. of total the other organisms | —        | —    | —     | —    | —     | —    |

## ZOOPLANKTON

Oithona similis  
Oithona sp  
Mecynocera clausi  
Setella gracilis  
Clytemnestra rostrata

Oncaea venusta  
Oncaea sp  
Corycaeus affinis  
Corycaeus sp  
Copilia longistylis

Copepoda larva  
Copepoda sp  
Oikopleura sp  
Penilia schmackeri  
Evadne tergestina

Noctiluca scintillans  
Conchoecia elegans  
Conchoecia sp  
Polychaeta larva  
Fish larva

Fish egg  
Pelagic egg  
Hyperia galba  
Hyperoche medusarum  
Hyperia sp

Themisto gracilipes  
Parathemisto sp  
Primno macropa  
Amphipoda larva  
Amphipoda sp

Euphausia pacifica  
Euphausia pacifica juv  
Euphausia larva  
Euphausia sp  
Lucifer raynaudii

Aglaurea hemistoma  
Pyrosoma atlanticum  
Muggiaea sp  
Salpa sp  
Pteropoda sp

Sagitta larva  
Sagitta sp  
Creseis acicula

3

1

8

14

6

7

1

1

1

3

19

1

3

8

2

1

2

| April |       |       | August |      |       |      |      |      |
|-------|-------|-------|--------|------|-------|------|------|------|
| 07    | 09    | 11    | 03     | 05   | 07    | 09   | 11   | 13   |
| 16    | 17    | 17    | 28     | 28   | 28    | 29   | 30   | 30   |
| 2245  | 0255  | 0650  | 0930   | 1235 | 2010  | 0210 | 1130 | 1650 |
| 50    | 50    | 50    | 60     | 150  | 150   | 150  | 150  | 150  |
| 10.0  | 15.0  | 5.0   | 少      | 6.0  | 22.0  | 20.0 | 7.0  | 10.0 |
| 42.9  | 11.23 | 182.9 | 3.8    | 84.5 | 214.6 | 134  | 59.1 | 97   |
| 1/32  | 1/64  | 1/16  | 1      | 1/16 | 1/32  | 1/32 | 1/16 | 1/32 |
| 356   | 223   | 197   | 475    | 593  | 764   | 1209 | 841  | 620  |
|       |       |       |        |      |       |      |      |      |
| 1     | 3     | 4     | 17     | 17   | 2     | 2    | 5    |      |
|       |       |       |        |      | 1     |      | 1    | 2    |
|       |       | 1     |        |      | 1     | 21   | 23   | 31   |
| 1     |       | 2     | 1      |      | 4     | 6    | 16   | 3    |
|       | 1     |       |        |      |       | 1    |      |      |
| 12    | 19    | 8     | 15     | 4    | 1     | 7    | 25   | 9    |
|       |       | 2     |        |      |       |      |      |      |
|       |       | 5     | 16     | 1    | 20    | 5    | 49   | 20   |
|       |       |       | 1      |      | 1     | 125  | 171  | 154  |
|       |       |       | 3      | 2    | 14    | 23   | 80   | 21   |
|       |       |       | 23     |      |       |      |      |      |
|       |       |       |        |      |       | 1    |      | 1    |
|       |       |       | 3      |      |       | 2    | 2    | 2    |
|       |       |       |        |      | 1     | 1    | 4    |      |
|       |       |       |        |      | 27    |      |      |      |
| 1     |       |       |        | 12   |       | 20   | 10   | 161  |
|       |       |       |        | 31   |       |      | 5    |      |
|       |       |       | 4      | 1    | 17    | 2    | 1    |      |
|       |       |       | 6      | 30   | 73    | 15   |      |      |
| 1     | 1     | 5     |        |      | 3     |      |      |      |
|       |       |       |        | 17   | 1     |      | 1    |      |
|       |       |       |        | 1    |       |      |      |      |
|       |       |       |        |      | 24    |      |      |      |
|       |       |       | 3      |      | 45    |      | 1    |      |
| 1     |       | 9     |        |      | 2     | 8    | 4    |      |
|       |       | 1     |        |      | 2     |      |      |      |
|       |       |       |        |      |       | 2    |      |      |
|       |       |       |        | 1    |       |      |      | 1    |
|       |       |       |        |      |       | 2    |      |      |
|       |       |       |        |      | 1     | 1    |      |      |
|       |       |       | 2      |      | 18    | 2    | 5    |      |
|       |       |       | 3      | 2    | 84    | 45   | 47   | 29   |
| 1     |       | 1     |        |      |       |      |      | 54   |



# D. 104 선 부유생물조사표

## Plankton Data, Line 104

| Month                            | February |       |       | April |       |       |       |
|----------------------------------|----------|-------|-------|-------|-------|-------|-------|
| Station                          | 05       | 07    | 10    | 04    | 06    | 08    | 10    |
| Date                             | 26       | 26    | 24    | 20    | 20    | 20    | 17    |
| Time                             | 2305     | 2000  | 0130  | 1525  | 1730  | 2105  | 1305  |
| Collected depth(m)               | 50       | 50    | 50    | 50    | 50    | 50    | 50    |
| Volume(cc)                       | 7.0      | 10.0  | 10.3  | 0.1   | 8.0   | 12.0  | 15.0  |
| Biomass(mg/m <sup>3</sup> )      | 190.8    | 154.8 | 202.7 | 4.3   | 593.2 | 577.8 | 614.6 |
| Rate of subsample                | 1/32     | 1/64  | 1/4   | 1     | 1/64  | 1/32  | 1/32  |
| No. of total organisms           | 222      | 186   | 288   | 23    | 138   | 257   | 253   |
| No. of total the other organisms | —        | —     | —     | —     | —     | —     | —     |
| ZOOPLANKTON                      |          |       |       |       |       |       |       |
| Calanus helgolandicus            | 2        | 7     | 3     |       |       |       | 3     |
| Calanus helgolandicus juv        |          |       |       |       |       |       |       |
| Calanus tenuicornis              | 17       | 4     | 23    |       | 1     | 2     | 10    |
| Calanus tenuicornis juv          |          |       |       | 1     | 12    | 10    |       |
| Calanus plumchrus                |          |       |       |       | 1     |       |       |
| Calanus plumchrus juv            |          |       |       |       |       |       | 14    |
| Calanus sp                       | 5        |       | 18    |       |       |       |       |
| Calanus jarva                    |          |       |       |       | 1     | 6     | 8     |
| Eucalanus mucronatus juv         |          |       |       |       |       |       |       |
| Eucalanus larva                  |          |       |       |       |       |       |       |
| Paracalanus parvus               | 100      | 52    | 37    | 4     | 16    | 43    | 19    |
| Paracalanus aculeatus            |          |       |       |       |       |       |       |
| Acrocalanus gibber               |          |       |       |       |       |       | 1     |
| Clausocalanus pergens            |          |       | 25    |       | 9     | 9     | 1     |
| Ctenocalanus vanus               | 14       | 20    |       |       | 1     | 1     | 6     |
| Pseudocalanus minutus            | 22       | 17    | 43    |       | 40    | 38    | 127   |
| Pseudocalanus gracilis           |          |       |       |       | 8     | 2     |       |
| Pareuchaeta elongata             |          | 1     |       |       |       |       |       |
| Euchaeta sp                      |          |       | 1     |       |       |       |       |
| Scolecithricella minor           | 2        | 1     | 2     |       |       |       |       |
| Centropages bradyi               |          |       | 1     |       |       |       |       |
| Centropages larva                |          |       | 1     |       |       |       |       |
| Metridia lucens                  | 18       | 5     | 46    |       |       | 60    |       |
| Metridia larva                   |          |       |       |       |       |       |       |
| Candacia bipinnata               |          |       |       |       |       |       |       |
| Candacia larva                   |          |       |       |       |       |       |       |
| Labidocera japonica juv          |          |       |       |       |       |       |       |
| Acartia clausi                   |          |       |       |       |       |       |       |
| Oithona plumifera                | 22       | 33    | 14    |       | 9     | 31    | 5     |
| Oithona nana                     |          |       |       | 2     | 16    | 35    | 23    |
| Oithona similis                  |          |       |       |       |       |       | 3     |
| Oithona larva                    |          |       |       |       | 4     |       |       |
| Oithona sp                       |          |       |       |       |       |       | 1     |
| Oncaea venusta                   |          | 1     | 1     | 1     |       |       |       |
| Oncaea larva                     |          |       |       |       |       |       |       |
| Corycaeus affinis                |          | 1     |       |       | 1     | 1     |       |
| Corycaeus Speciosus              |          |       |       |       |       |       |       |
| Copepoda larva                   | 15       | 38    | 62    | 1     | 8     | 5     | 26    |
| Copepoda sp                      |          |       |       | 6     | 8     |       |       |
| Oikopleura sp                    | 2        | 5     | 8     | 2     |       |       |       |
| Podon Schmackeri                 |          |       |       |       |       |       |       |
| Podon Leuckarti                  |          |       |       |       |       |       |       |
| Penilia schmackeri               |          |       |       |       |       |       |       |
| Evadne tergestina                |          |       |       |       |       |       |       |
| Conchoecia elegans               |          |       |       |       |       |       |       |
| Noctiluca scintillans            |          |       |       |       |       |       |       |

| August |       |       |      | December |      |      |       |      |      |
|--------|-------|-------|------|----------|------|------|-------|------|------|
| 05     | 07    | 09    | 13   | 04       | 05   | 06   | 08    | 10   | 12   |
| 27     | 26    | 26    | 25   | 2        | 2    | 2    | 2     | 3    | 3    |
| 0245   | 1930  | 0650  | 2230 | 1350     | 1435 | 1630 | 2225  | 0340 | 0805 |
| 150    | 150   | 150   | 150  | 50       | 50   | 50   | 50    | 50   | 50   |
| 10.0   | 10.0  | 15.0  | 18.0 | 1.8      | 1.6  | 7.0  | 8.0   | 4.0  | 3.0  |
| 104    | 103.2 | 113.2 | 63   | 52.5     | 59   | 111  | 152.4 | 76.4 | 66.8 |
| 1/16   | 1/64  | 1/64  | 1/32 | —        | —    | —    | —     | —    | —    |
| 753    | 471   | 499   | 611  | —        | —    | —    | —     | —    | —    |
| —      | —     | —     | —    | —        | —    | —    | —     | —    | —    |

|     |     |     |     |
|-----|-----|-----|-----|
| 7   | 1   |     | 5   |
|     | 7   |     | 3   |
| 3   | 4   |     | 1   |
| 12  | 2   |     |     |
| 10  | 3   | 1   |     |
| 11  | 3   | 2   | 9   |
|     | 2   |     |     |
|     |     |     | 2   |
| 249 | 142 | 48  | 76  |
| 2   |     |     |     |
| 7   | 2   | 10  | 18  |
| 17  | 5   | 3   | 1   |
| 35  | 30  |     |     |
| 6   | 1   |     |     |
|     |     | 1   |     |
|     |     | 1   |     |
| 20  | 5   |     | 9   |
|     | 2   |     | 1   |
|     |     | 2   |     |
|     | 1   |     |     |
|     |     |     | 1   |
| 76  | 15  | 3   | 7   |
| 54  | 31  | 23  | 32  |
|     | 1   |     |     |
|     | 9   | 2   | 1   |
| 1   | 1   | 16  | 10  |
|     | 1   |     |     |
| 15  | 3   | 4   | 2   |
|     | 1   |     |     |
| 16  | 4   | 3   | 5   |
| 22  | 36  | 11  | 12  |
|     |     |     | 5   |
|     |     |     | 1   |
| 4   | 1   | 253 | 265 |
| 31  | 73  | 14  | 71  |
|     |     | 1   |     |
|     |     | 30  |     |

| Month                            | February |       |       | April |       |       |       |
|----------------------------------|----------|-------|-------|-------|-------|-------|-------|
| Station                          | 05       | 07    | 10    | 04    | 06    | 08    | 10    |
| Date                             | 26       | 26    | 24    | 20    | 20    | 20    | 17    |
| Time                             | 2305     | 2020  | 0130  | 1525  | 1730  | 2105  | 1305  |
| Collected depth(m)               | 50       | 50    | 50    | 50    | 50    | 50    | 50    |
| Volume(cc)                       | 7.0      | 10.0  | 10.3  | 0.1   | 8.0   | 12.0  | 15.0  |
| Biomass(mg/m <sup>3</sup> )      | 190.8    | 154.8 | 202.7 | 4.3   | 593.2 | 577.8 | 614.6 |
| Rate of subsample                | 1/32     | 1/64  | 1/4   | 1     | 1/64  | 1/32  | 1/32  |
| No. of total organisms           | 222      | 166   | 283   | 23    | 138   | 257   | 253   |
| No. of total the other organisms | —        | —     | —     | —     | —     | —     | —     |

# ZOOPLANKTON

Polychaeta larva

Shell larva

Fish larva

Fish egg

Ophiopluteus larva

Pelagic egg

Hyperia galba

Thamisto gracilipes

Parathemisto sp

Primno macropa

Euphausia pacifica

Euphausia pacifica larva

Euphausia larva

Euphausia sp

Lucifer raynaudii

Aglaura hemistoma

Diphyas appendiculata

Pteropoda sp

Sagitta enflata

Sagitta badoti

Sagitta larva

Sagitta sp

1

2

1

2

2

2

1

1

6

3

1

1

1

1

7

4

| August |       |       |      | December |      |      |       |      |      |
|--------|-------|-------|------|----------|------|------|-------|------|------|
| 05     | 07    | 09    | 13   | 04       | 05   | 06   | 08    | 10   | 12   |
| 27     | 26    | 26    | 25   | 2        | 2    | 2    | 2     | 3    | 3    |
| 0245   | 1930  | 0650  | 2230 | 1350     | 1435 | 1630 | 2225  | 0340 | 0805 |
| 150    | 150   | 150   | 150  | 50       | 50   | 50   | 50    | 50   | 50   |
| 10.0   | 10.0  | 15.0  | 18.0 | 1.8      | 1.6  | 7.0  | 8.0   | 4.0  | 3.0  |
| 104    | 108.2 | 113.2 | 63   | 52.5     | 59   | 111  | 152.4 | 76.4 | 66.8 |
| 1/16   | 1/64  | 1/64  | 1/32 | —        | —    | —    | —     | —    | —    |
| 753    | 471   | 499   | 611  | —        | —    | —    | —     | —    | —    |
| —      | —     | —     | —    | —        | —    | —    | —     | —    | —    |

|    |    |    |    |
|----|----|----|----|
| 2  | 2  |    |    |
| 2  | 2  |    |    |
|    | 2  | 1  | 2  |
| 2  |    |    | 12 |
| 12 | 4  | 5  | 21 |
| 1  | 3  | 1  | 1  |
| 35 | 28 |    | 7  |
|    |    |    | 1  |
| 6  | 8  |    | 1  |
| 5  | 1  |    | 2  |
| 3  | 2  |    |    |
| 9  | 3  |    |    |
|    | 3  | 1  |    |
|    |    |    | 1  |
| 1  | 3  | 3  | 1  |
|    |    | 2  |    |
|    |    | 5  | 5  |
| 9  | 26 | 46 | 19 |
|    |    | 7  |    |

# E. 103 선 부유생물조사표 Plankton Data, Line 103

| Month                            | February |      |      |       |       |
|----------------------------------|----------|------|------|-------|-------|
| Station                          | 04       | 06   | 08   | 10    | 04    |
| Date                             | 27       | 28   | 28   | 28    | 21    |
| Time                             | 0500     | 1015 | 1345 | 1745  | 0420  |
| Collected depth(m)               | 50       | 50   | 50   | 50    | 50    |
| Volume(cc)                       | 3.0      | 1.2  | 2.0  | 3.0   | 13    |
| Biomass(mg/m <sup>3</sup> )      | 55.2     | 17   | 60.2 | 197.9 | 19.79 |
| Rate of subsample                | 1/16     | 1/4  | 1/32 | 1/16  | 1/16  |
| No. of total organisms           | 361      | 371  | 272  | 371   | 354   |
| No. of total the other organisms | —        | —    | —    | —     | —     |
| <b>ZOOPLANKTON</b>               |          |      |      |       |       |
| <i>Calanus helgolandicus</i>     | 12       | 8    |      | 8     | 15    |
| <i>Calanus helgolandicus</i> juv |          |      |      |       | 3     |
| <i>Calanus tenuicornis</i>       | 5        | 9    | 15   | 12    | 3     |
| <i>Calanus tenuicornis</i> juv   |          |      |      |       |       |
| <i>Calanus plumchrus</i>         |          | 1    |      |       | 1     |
| <i>Calanus robustior</i>         |          |      |      |       |       |
| <i>Calanus robustior</i> juv     |          |      |      |       |       |
| <i>Calanus larva</i>             | 16       | 16   | 22   | 10    | 10    |
| <i>Calanus</i> sp                |          |      |      |       |       |
| <i>Eucalanus larva</i>           |          |      |      |       |       |
| <i>Eucalanus</i> sp              |          | 1    |      |       |       |
| <i>Paracalanus parvus</i>        | 234      | 185  | 160  | 103   | 165   |
| <i>Paracalanus aculeatus</i>     |          |      |      | 1     |       |
| <i>Acrocalanus gracilis</i>      |          |      |      | 1     |       |
| <i>Acrocalanus gibber</i>        |          |      |      |       | 1     |
| <i>Calocalanus pavo</i>          |          |      |      |       |       |
| <i>Clausocalanus pergens</i>     | 1        | 4    | 5    | 26    | 1     |
| <i>Ctenocalanus vanus</i>        | 25       | 8    | 5    | 20    | 4     |
| <i>Pseudocalanus minutus</i>     | 25       | 6    | 2    | 15    | 13    |
| <i>Pareuchaeta elongata</i>      |          |      |      |       |       |
| <i>Euchaeta larva</i>            |          |      |      |       |       |
| <i>Scolecithricella minor</i>    |          |      |      |       |       |
| <i>Scolecithricella</i> sp       |          |      |      |       |       |
| <i>Centropages abdominalis</i>   | 4        | 2    |      |       | 7     |
| <i>Centropages gracilis</i>      |          |      |      |       |       |
| <i>Centropages larva</i>         |          |      |      | 1     |       |
| <i>Mecynocera clausi</i>         |          |      |      | 1     |       |
| <i>Temora stylifera</i>          |          |      |      |       |       |
| <i>Lucicutia flavicornis</i>     |          |      |      |       |       |
| <i>Candacia bipinnata</i>        |          |      |      |       |       |
| <i>Candacia larva</i>            |          |      |      |       |       |
| <i>Metridia lucens</i>           | 6        |      |      |       | 1     |
| <i>Metridia larva</i>            |          |      |      |       |       |
| <i>Acartia clausi</i>            |          |      |      |       |       |
| <i>Acartia erythraea</i>         |          |      |      |       |       |
| <i>Acartia erythraea</i> juv     |          |      |      |       |       |
| <i>Acartia larva</i>             |          | 4    |      |       |       |
| <i>Oithona plumifera</i>         | 9        | 59   | 29   | 91    | 6     |
| <i>Oithona similis</i>           |          |      |      |       |       |
| <i>Oithona nana</i>              |          |      |      |       | 12    |
| <i>Oithona larva</i>             |          |      |      |       |       |
| <i>Oithona</i> sp                |          |      |      |       |       |
| <i>Clytemnestra rostrata</i>     |          |      |      |       |       |
| <i>Oncaea venusta</i>            | 1        | 1    | 1    | 3     |       |
| <i>Oncaea</i> sp                 |          |      |      |       |       |
| <i>Corycaeus affinis</i>         | 4        | 21   | 3    | 5     | 14    |

| April |       |       | August |       |      |      |      |
|-------|-------|-------|--------|-------|------|------|------|
| 06    | 08    | 10    | 05     | 07    | 09   | 11   | 13   |
| 21    | 21    | 21    | 24     | 25    | 25   | 25   | 25   |
| 0610  | 0935  | 1405  | 2020   | 0045  | 0715 | 1210 | 1655 |
| 50    | 50    | 50    | 150    | 150   | 150  | 150  | 150  |
| 11    | 11    | 10    | 6      | 13    | 11   | 33   | 10   |
| 111.9 | 145.9 | 109.6 | 51.7   | 132.2 | 83.3 | 147  | 83.3 |
| 1/32  | 1/16  | 1/16  | 1/32   | 1/64  | 1/32 | 1/64 | 1/64 |
| 356   | 516   | 300   | 663    | 392   | 699  | 421  | 457  |
| —     | —     | —     | —      | —     | —    | —    | —    |
| 3     | 17    | 18    | 1      | 4     | 2    | 1    | 4    |
| 15    | 28    | 4     | 7      | 2     | 5    | 4    |      |
| 2     |       |       | 4      |       |      |      |      |
|       | 1     |       | 15     |       |      |      | 5    |
|       |       |       | 3      |       |      |      |      |
| 17    |       | 1     |        |       |      |      |      |
| 5     |       |       |        |       |      |      |      |
| 7     | 5     |       | 5      | 1     | 5    | 4    | 17   |
|       |       | 1     |        | 2     |      |      |      |
|       |       |       |        |       | 1    |      |      |
| 68    | 315   | 981   | 259    | 46    | 102  | 39   | 97   |
|       |       |       |        | 1     |      |      |      |
| 2     |       |       |        |       |      |      |      |
|       |       |       |        | 1     |      |      |      |
| 34    |       |       | 2      | 6     | 15   | 4    | 14   |
|       |       |       |        | 1     | 11   | 3    | 8    |
| 20    | 2     | 5     | 19     |       |      |      | 7    |
|       |       |       |        | 1     |      |      |      |
|       |       |       |        | 2     |      |      |      |
|       |       |       | 1      | 1     |      |      | 3    |
|       |       |       |        |       | 1    |      |      |
| 1     |       |       |        |       |      |      |      |
| 1     |       | 1     |        |       | 1    |      | 1    |
|       |       |       |        |       |      | 1    | 1    |
|       |       |       |        |       | 1    |      | 1    |
|       |       |       |        |       | 2    |      |      |
|       |       |       | 4      | 4     |      |      |      |
|       |       |       | 1      |       |      | 2    |      |
|       |       |       | 25     | 10    | 4    |      | 56   |
|       |       |       |        | 1     | 2    |      |      |
|       |       |       | 1      |       |      |      |      |
| 15    | 7     | 5     | 24     | 35    | 31   | 1    |      |
|       | 1     |       | 1      |       |      | 13   | 3    |
| 7     |       | 3     |        |       |      |      |      |
|       |       |       |        |       |      |      |      |
|       | 25    | 16    | 9      | 2     | 6    | 15   | 4    |
|       |       | 3     |        |       |      |      |      |
|       | 1     |       | 2      | 10    | 28   | 1    | 1    |
|       |       | 1     |        |       |      | 14   | 6    |
| 22    | 5     | 9     | 27     | 2     | 5    | 5    | 2    |

|                                  |          |      |      |       |       |
|----------------------------------|----------|------|------|-------|-------|
| Month                            | February |      |      |       |       |
| Station                          | 04       | 06   | 08   | 10    | 04    |
| Date                             | 27       | 28   | 28   | 28    | 21    |
| Time                             | 0600     | 1015 | 1345 | 1745  | 0420  |
| Collected depth(m)               | 50       | 50   | 50   | 50    | 50    |
| Volume(cc)                       | 3.0      | 1.2  | 2.0  | 3.0   | 13    |
| Biomass(mg/m <sup>3</sup> )      | 55.2     | 37   | 60.2 | 197.9 | 19.79 |
| Rate of subsample                | 1/16     | 1/4  | 1/32 | 1/16  | 1/16  |
| No. of total organisms           | 361      | 371  | 272  | 371   | 354   |
| No. of total the other organisms | —        | —    | —    | —     | —     |

# ZOOPLANKTON

|                       |    |    |    |    |    |
|-----------------------|----|----|----|----|----|
| Copepoda larva        |    |    | 6  | 30 | 2  |
| Copepoda sp           | 12 | 5  |    |    | 5  |
| Oikopleura sp         | 2  | 29 | 16 | 20 | 12 |
| Penilia schmackeri    |    |    |    |    |    |
| Evadne tergestina     |    | 1  |    |    | 5  |
| Evadne nordmanni      |    |    |    |    | 5  |
| Conchoecia elegans    |    |    |    |    |    |
| Noctiluca scintillans |    |    |    |    |    |
| Fish larva            |    |    |    |    |    |
| Polychaeta larva      |    |    |    |    |    |
| Pelagic egg           |    | 2  | 1  | 1  |    |
| Hyperia galba         |    |    |    |    |    |
| Hyperia sp            |    |    |    |    |    |
| Themisto gracilipes   |    |    |    |    |    |
| Parathemisto sp       | 4  | 1  | 2  | 8  | 3  |
| Primno macropa        |    |    |    |    |    |
| Brachyscelus cruscum  |    |    |    |    |    |
| Amphipoda larva       |    |    |    |    |    |
| Amphipoda sp          |    |    |    |    |    |
| Decapoda sp           |    |    |    |    |    |
| Euphausia pacifica    |    |    |    |    |    |
| Leptochera sydniensis |    |    |    |    |    |
| Euphausia larva       | 1  | 2  | 1  | 2  | 69 |
| Lucifer raynaudii     |    |    |    |    |    |
| Muggiaea atlantica    |    |    |    |    |    |
| Salpa sp              |    |    |    |    | 2  |
| Aglaura hemistoma     |    |    |    |    |    |
| Pteropoda sp          |    |    |    |    |    |
| Sagitta enflata       |    |    |    |    |    |
| Sagitta elegans       |    |    |    |    |    |
| Sagitta bipunctata    |    |    |    |    |    |
| Sagitta bedoti        |    |    |    |    |    |
| Sagitta Pulchura      |    |    |    |    |    |
| Sagitta minima        |    |    |    |    |    |
| Sagitta larva         |    |    |    |    |    |
| Sagitta sp            |    | 5  | 4  | 13 |    |

| April |       |       | August |       |      |      |      |
|-------|-------|-------|--------|-------|------|------|------|
| 06    | 08    | 10    | 05     | 07    | 09   | 11   | 13   |
| 21    | 21    | 21    | 24     | 25    | 25   | 25   | 35   |
| 0610  | 0935  | 1405  | 2020   | 0045  | 0715 | 1210 | 1655 |
| 50    | 50    | 50    | 150    | 150   | 150  | 150  | 150  |
| 11.0  | 11.0  | 10.0  | 6      | 13    | 11   | 33   | 10   |
| 111.9 | 145.9 | 109.6 | 51.7   | 132.2 | 83.3 | 147  | 83.3 |
| 1/32  | 1/16  | 1/16  | 1/32   | 1/64  | 1/32 | 1/64 | 1/64 |
| 356   | 516   | 300   | 663    | 392   | 699  | 421  | 457  |

|    |    |    |     |     |     |     |    |   |
|----|----|----|-----|-----|-----|-----|----|---|
| 4  |    | 6  |     |     |     |     |    |   |
|    | 83 | 21 |     |     |     |     |    |   |
| 60 | 10 | 2  | 31  | 28  | 20  | 14  | 44 |   |
|    |    |    | 2   | 6   | 151 | 102 | 23 |   |
|    |    | 3  | 132 | 107 | 79  | 16  | 27 |   |
|    |    |    |     |     |     |     |    |   |
|    |    |    | 1   | 2   |     |     |    |   |
|    |    |    |     | 2   |     |     |    |   |
|    |    |    |     |     | 19  |     |    | 1 |
|    |    |    | 2   |     |     | 1   |    |   |
|    |    |    |     | 1   |     |     |    |   |
|    | 3  |    |     | 32  | 68  | 40  | 45 |   |
|    | 3  |    | 9   | 9   | 10  | 3   | 5  |   |
|    |    |    |     | 3   | 1   | 3   |    |   |
|    | 2  |    | 23  |     | 9   | 11  | 28 |   |
|    |    |    |     |     |     |     |    |   |
|    |    |    |     | 1   |     |     |    | 1 |
|    |    |    |     |     |     | !   |    |   |
|    |    |    | 21  |     |     |     |    |   |
|    |    |    | 1   | 5   |     |     |    |   |
|    | 1  |    |     |     |     |     |    |   |
|    |    |    | 1   | 1   |     |     |    |   |
| 6  |    |    |     |     |     |     |    |   |
| 49 | 5  | 12 | 14  |     | 3   | 1   | 10 |   |
|    |    |    | 1   | 4   |     |     |    |   |
|    |    |    | 2   |     |     |     |    |   |
|    |    |    |     |     |     |     |    |   |
| 4  |    |    |     | 2   |     |     |    |   |
| 2  |    |    |     |     |     |     |    |   |
|    |    |    |     | 2   |     |     |    |   |
|    |    |    |     |     | 5   |     |    |   |
|    |    |    |     |     |     |     |    | 1 |
|    |    |    |     |     |     |     |    | 1 |
|    |    |    |     |     |     |     |    |   |
|    |    |    |     | 1   |     |     |    |   |
|    |    |    |     | 3   | 1   | 16  | 5  |   |
|    |    |    |     |     | 4   | 5   |    |   |
|    |    |    |     | 3   |     | 2   |    |   |
|    |    |    | 4   | 40  | 87  | 88  | 27 |   |
|    |    |    |     |     |     |     |    |   |
|    |    |    |     | 3   | 12  |     |    |   |
| 2  | 2  |    |     |     |     |     |    |   |



## F. 102선 부유생물 조사표

## Plankton Data, Line 102

| Month                            | February | March |      |      |  | April |      |      |
|----------------------------------|----------|-------|------|------|--|-------|------|------|
| Station                          | 10       | 04    | 06   | 08   |  | 04    | 06   | 08   |
| Date                             | 28       | 1     | 1    | 1    |  | 22    | 22   | 21   |
| Time                             | 2105     | 0820  | 0525 | 0115 |  | 0245  | 0110 | 2130 |
| Collected depth(m)               | 50       | 50    | 50   | 50   |  | 50    | 50   | 50   |
| Volume(cc)                       | 1.7      | 1.0   | 1.0  | 1.5  |  | 1.5   | 2.7  | 3.2  |
| Biomass(mg/m <sup>3</sup> )      | 3.12     | 22.8  | 30.5 | 24   |  | 31.2  | 59   | 63.2 |
| Rate of subsample                | 1/16     | 1/8   | 1/8  | 1/4  |  | 1/16  | 1/16 | 1/8  |
| No. of total organisms           | 227      | 363   | 559  | 348  |  | 194   | 268  | 756  |
| No. of total the other organisms | —        | —     | —    | —    |  | —     | —    | —    |
| <b>ZOOPLANKTON</b>               |          |       |      |      |  |       |      |      |
| <i>Calanus helgolandicus</i>     | 1        | 5     | 3    | 2    |  | 4     | 13   | 8    |
| <i>Calanus helgolandicus</i> juv |          |       |      |      |  |       |      | 1    |
| <i>Calanus tenuicornis</i>       | 7        | 1     | 5    | 3    |  |       |      |      |
| <i>Calanus tenuicornis</i> juv   |          |       |      |      |  |       |      |      |
| <i>Calanus</i> larva             | 8        | 13    | 2    | 6    |  | 1     |      |      |
| <i>Eucalanus crassus</i>         |          |       |      |      |  |       |      |      |
| <i>Eucalanus</i> larva           |          |       |      |      |  |       |      |      |
| <i>Paracalanus parvus</i>        | 78       | 252   | 425  | 202  |  | 108   | 155  | 189  |
| <i>Paracalanus aculeatus</i>     |          |       |      | 1    |  |       |      |      |
| <i>Clausocalanus pergens</i>     | 42       | 2     | 5    | 12   |  |       |      |      |
| <i>Ctenocalanus vanus</i>        | 14       | 6     | 3    | 19   |  |       |      |      |
| <i>Pseudocalanus minutus</i>     | 17       | 1     | 7    | 2    |  | 3     | 4    |      |
| <i>Pareuchaeta elongata</i>      |          | 1     |      |      |  |       |      |      |
| <i>Euchaeta</i> larva            |          |       |      |      |  |       | 1    |      |
| <i>Euchaeta</i> sp               |          |       |      | 1    |  |       |      |      |
| <i>Scolecithricella minor</i>    |          |       |      |      |  |       |      |      |
| <i>Scolecithricella bradyi</i>   |          |       |      |      |  |       |      |      |
| <i>Centropages abdominalis</i>   | 1        |       | 9    |      |  |       |      |      |
| <i>Centropages bradyi</i>        |          |       |      |      |  |       |      |      |
| <i>Centropages</i> larva         |          |       |      |      |  | 2     | 3    |      |
| <i>Temora stylifera</i>          |          |       |      |      |  |       |      |      |
| <i>Mecynocera clausi</i>         |          |       | 1    |      |  |       |      |      |
| <i>Metridia lucens</i>           | 7        |       | 7    | 2    |  |       | 11   |      |
| <i>Metridia</i> sp               | 7        | 4     |      | 1    |  |       |      |      |
| <i>Lucicutia flavicornis</i>     |          |       |      |      |  |       |      |      |
| <i>Candacia bipinnata</i>        |          |       |      |      |  |       |      |      |
| <i>Candacia</i> larva            |          |       |      |      |  |       |      |      |
| <i>Labidocera japonica</i>       |          |       |      |      |  |       |      |      |
| <i>Labidocera japonica</i> juv   |          |       |      |      |  |       |      |      |
| <i>Pontellina</i> larva          |          |       |      |      |  |       |      |      |
| <i>Acartia clausi</i>            |          |       |      |      |  |       |      |      |
| <i>Oithona plumifera</i>         | 43       | 10    | 36   | 54   |  | 8     | 2    | 4    |
| <i>Oithona nana</i>              |          |       |      |      |  |       | 6    | 1    |
| <i>Oithona</i> larva             |          |       |      |      |  | 10    | 22   | 11   |
| <i>Oithona</i> sp                |          |       |      |      |  |       | 5    |      |
| <i>Setella</i> sp                |          |       |      |      |  |       |      |      |
| <i>Clytemnestra rostrata</i>     |          |       |      |      |  |       |      |      |
| <i>Clytemnestra</i> larva        |          |       |      |      |  |       |      |      |
| <i>Oncaea venusta</i>            | 1        |       | 1    | 6    |  |       |      |      |
| <i>Oncaea</i> sp                 | 1        |       |      |      |  |       |      |      |
| <i>Corycaeus affinis</i>         | 1        | 10    | 12   | 6    |  | 3     | 7    | 3    |
| <i>Corycaeus</i> sp              |          |       |      |      |  | 4     | 3    |      |
| <i>Copepoda</i> larva            | 34       | 8     | 20   | 16   |  | 6     | 2    | 6    |
| <i>Copepoda</i> sp               |          |       |      |      |  | 26    | 19   | 3    |
| <i>Ophiopluteus</i> larva        |          |       |      |      |  |       |      | 2    |

|      | August |      |      |      |      | December |      |      |      |      |
|------|--------|------|------|------|------|----------|------|------|------|------|
|      | 05     | 07   | 09   | 11   | 13   | 05       | 06   | 08   | 10   | 12   |
| 10   | 19     | 19   | 19   | 18   | 18   | 8        | 8    | 10   | 10   | 10   |
| 21   | 1140   | 1650 | 0050 | 1910 | 1200 | 1105     | 1220 | 0115 | 0610 | 1030 |
| 50   | 125    | 150  | 150  | 150  | 150  | 150      | 150  | 150  | 150  | 150  |
| 5.0  | 4.0    | 1.5  | 4.0  | 7.0  | 4.0  | 3.0      | 5.5  | 10.0 | 6.5  | 4.0  |
| 70.4 | 4.0    | 22.7 | 31.5 | 42.6 | 10.5 | 28.8     | 39.7 | 45   | 64.4 | 44   |
| 1/8  | 1/32   | 1/4  | 1/32 | 1/32 | 1/32 | —        | —    | —    | —    | —    |
| 278  | 602    | 342  | 966  | 543  | 487  | —        | —    | —    | —    | —    |
| —    | —      | —    | —    | —    | —    | —        | —    | —    | —    | —    |
| 5    | 3      | 1    | 2    | 1    | 7    |          |      |      |      |      |
| 7    | 14     | 10   | 1    | 3    |      |          |      |      |      |      |
|      | 3      | 19   | 5    |      |      |          |      |      |      |      |
| 144  | 170    | 165  | 83   | 161  | 13   |          |      |      |      |      |
|      | 2      | 1    | 1    | 20   | 2    |          |      |      |      |      |
|      | 9      |      | 13   | 13   | 9    |          |      |      |      |      |
|      | 1      | 5    |      |      | 1    |          |      |      |      |      |
|      | 1      |      | 1    |      |      |          |      |      |      |      |
|      |        |      | 2    | 6    |      |          |      |      |      |      |
|      |        |      |      | 2    |      |          |      |      |      |      |
| 6    |        |      |      | 1    |      |          |      |      |      |      |
|      |        |      | 3    | 1    |      |          |      |      |      |      |
|      |        |      | 7    |      |      |          |      |      |      |      |
|      |        |      | 1    |      | 1    |          |      |      |      |      |
|      |        |      | 1    |      |      |          |      |      |      |      |
|      | 1      |      | 1    |      |      |          |      |      |      |      |
|      |        |      | 2    |      |      |          |      |      |      |      |
|      |        |      |      |      | 2    |          |      |      |      |      |
| 5    | 15     | 11   | 1    | 35   |      |          |      |      |      |      |
| 19   | 22     | 10   | 8    | 10   | 9    |          |      |      |      |      |
| 48   | 13     |      | 4    | 15   | 2    |          |      |      |      |      |
|      |        |      | 1    | 1    |      |          |      |      |      |      |
|      |        |      |      |      | 1    |          |      |      |      |      |
| 3    | 1      |      | 9    | 6    | 13   |          |      |      |      |      |
|      | 1      |      |      |      |      |          |      |      |      |      |
| 6    | 20     | 15   |      | 15   | 1    |          |      |      |      |      |
| 9    | 11     | 8    | 11   | 5    | 1    |          |      |      |      |      |
| 11   | 2      | 1    |      |      | 2    |          |      |      |      |      |

| Month                            | February | March |      |      | April |      |      |
|----------------------------------|----------|-------|------|------|-------|------|------|
| Station                          | 10       | 04    | 06   | 08   | 04    | 06   | 08   |
| Date                             | 28       | 1     | 1    | 1    | 22    | 22   | 21   |
| Time                             | 2105     | 0820  | 0525 | 0115 | 0245  | 0110 | 2130 |
| Collected depth(m)               | 50       | 50    | 50   | 50   | 50    | 50   | 50   |
| Volume(cc)                       | 1.7      | 1.0   | 1.0  | 1.5  | 1.5   | 2.7  | 3.2  |
| Biomass (mg/m <sup>3</sup> )     | 31.2     | 22.8  | 30.5 | 24   | 31.2  | 59   | 63.2 |
| Rate of subsample                | 1/16     | 1/8   | 1/8  | 1/4  | 1/16  | 1/16 | 1/8  |
| No. of total organisms           | 227      | 363   | 559  | 348  | 194   | 268  | 756  |
| No. of total the other organisms | —        | —     | —    | —    | —     | —    | —    |

# ZOOPLANKTON

|                          |   |    |    |   |   |   |    |
|--------------------------|---|----|----|---|---|---|----|
| Oikopleura sp            | 8 | 42 | 12 | 6 | 4 | 5 | 1  |
| Penilia schmackeri       |   |    |    |   | 1 |   |    |
| Evadne tergestina        |   |    |    |   |   |   | 9  |
| Conchoecia elegans       |   |    |    |   |   |   |    |
| Conchoecia sp            |   | 1  | 2  | 2 |   | 1 |    |
| Noctiluca scintillans    |   |    |    |   |   |   |    |
| Polychaeta larva         |   |    |    |   |   |   |    |
| Fish larva               |   |    |    |   |   |   |    |
| Fish egg                 |   |    |    |   |   |   |    |
| Shell larva              | 1 |    |    | 1 |   |   |    |
| Pelagic egg              |   | 5  | 2  |   | 1 |   | 2  |
| Hyperia galba            |   |    |    |   |   |   |    |
| Hyperoche medusarum      |   |    |    |   |   |   |    |
| Hyperia sp               |   |    |    |   |   |   |    |
| Themisto gracilipes      |   |    |    |   |   |   |    |
| Parathemisto obliqua     |   |    |    |   |   |   |    |
| Euphausia pacifica       |   |    |    |   |   | 1 |    |
| Euphausia pacifica larva |   |    |    |   |   |   |    |
| Leptochela sydnensis     |   |    |    |   |   |   |    |
| Euphausia larva          |   | 2  |    |   | 4 | 3 | 14 |
| Euphausia sp             | 4 | 1  | 2  |   |   |   |    |
| Decapoda larva           |   |    |    |   |   |   |    |
| Lucifer raynaudii        |   |    |    |   |   |   |    |
| Muggiaea atlantica       |   |    |    |   |   |   |    |
| Muggiaea sp              |   |    | 4  | 4 | 3 |   |    |
| Aglaure hemistoma        |   |    |    |   |   |   |    |
| Aglaure sp               |   |    |    | 1 |   |   |    |
| Salpa sp                 |   |    |    |   | 4 |   | 1  |
| Balanus larva            |   |    |    |   |   |   |    |
| Pteropoda sp             |   |    |    |   |   |   |    |
| Sagitta bedoti           |   |    |    |   |   |   |    |
| Sagitta minima           |   |    |    |   |   |   |    |
| Sagitta serratodentata   |   |    |    |   |   |   |    |
| Sagitta larva            |   |    |    |   | 1 |   |    |
| Sagitta sp               | 2 |    | 1  | 1 |   | 1 | 1  |
| Ceratium sp              |   |    |    |   | 1 |   |    |
| Creseis acicula          |   |    |    |   |   |   |    |





남 해 부 유 생 물 조 사 성 적

PLANKTON DATA  
SOUTHERN WATERS

1 9 6 5







| Month                            | March |       |      | April |      |      |      | August |       |       |      |
|----------------------------------|-------|-------|------|-------|------|------|------|--------|-------|-------|------|
| Station                          | 04    | 06    | 08   | 04    | 06   | 08   | 10   | 06     | 08    | 10    | 12   |
| Date                             | 2     | 2     | 2    | 22    | 22   | 22   | 22   | 17     | 17    | 17    | 18   |
| Time                             | 0635  | 0900  | 1240 | 0450  | 0717 | 1100 | 1205 | 1040   | 1725  | 2200  | 0220 |
| Collected depth(m)               | 50    | 50    | 50   | 50    | 50   | 50   | 50   | 150    | 150   | 130   | 100  |
| Volume(cc)                       | 2.0   | 4.0   | 2.0  | 5.0   | 2.6  | 1.8  | 1.7  | 6.0    | 16.0  | 10.0  | 7.0  |
| Biomass(mg/m <sup>3</sup> )      | 35.5  | 100.9 | 30.2 | 48.2  | 58   | 40.5 | 40.3 | 311.8  | 191.1 | 120   | 62.5 |
| Rate of subsample                | 1/4   | 1/8   | 1/8  | 1/16  | 1/8  | 1/8  | 1/16 | 1/8    | 1/32  | 1/32  | 1/32 |
| No. of total organisms           | 502   | 367   | 487  | 145   | 363  | 299  | 123  | 232    | 713   | 1.735 | 533  |
| No. of total the other organisms | —     | —     | —    | —     | —    | —    | —    | —      | —     | —     | —    |
| <b>ZOOPLANKTON</b>               |       |       |      |       |      |      |      |        |       |       |      |
| <i>Penilia schmackeri</i>        |       |       |      |       |      |      |      |        | 99    | 122   | 219  |
| <i>Evadne tergestina</i>         |       |       |      | 1     | 2    | 15   | 2    | 3      | 161   | 45    | 15   |
| <i>Conchoecia elegans</i>        |       |       |      |       |      |      |      |        | 2     | 6     | 8    |
| <i>Conchoecia</i> sp             | 2     | 3     | 2    |       |      |      |      |        | 1     |       |      |
| <i>Noctiluca scintillans</i>     |       |       |      |       |      |      |      |        |       | 22    | 4    |
| <i>Parafavella denticulata</i>   |       |       |      |       |      |      |      |        |       | 6     |      |
| <i>Polychaeta</i> larva          |       |       |      |       |      |      |      |        |       |       | 2    |
| <i>Polychaeta</i> sp             |       | 3     |      |       |      |      |      |        |       |       |      |
| <i>Brachyura</i> larva           | 1     |       |      |       |      |      |      |        |       |       |      |
| Fish egg                         |       |       |      |       | 81   | 6    |      |        |       |       |      |
| Pelagic egg                      | 21    | 31    | 2    |       | 159  | 7    | 4    |        |       |       |      |
| <i>Hyperia galba</i>             |       |       |      |       |      |      |      | 4      |       |       |      |
| <i>Hyperia schijogenios</i>      |       |       |      |       |      |      |      |        |       |       | 1    |
| <i>Hyperia</i> sp                |       |       |      |       |      |      |      |        | 1     |       |      |
| <i>Themisto gracilipes</i>       |       |       |      |       |      |      |      | 3      |       |       |      |
| <i>Amphipoda</i> larva           |       |       |      |       |      |      |      |        | 2     |       |      |
| <i>Euphausia</i> larva           | 3     | 25    |      | 15    | 7    | 32   | 15   | 20     | 2     | 1     | 2    |
| <i>Euphausia</i> sp              | 1     | 1     | 3    |       |      |      |      |        |       |       |      |
| <i>Leptochera sydnensis</i>      |       |       |      | 4     |      |      | 9    |        |       |       | 3    |
| <i>Lucifer raynaudii</i>         |       |       |      |       |      |      |      |        | 14    | 1     | 6    |
| <i>Muggiaea atlantica</i>        |       |       |      |       |      |      |      |        | 2     |       | 1    |
| <i>Oberia geniculata</i>         |       |       |      |       |      |      |      |        |       | 1     |      |
| <i>Pyrosoma atlanticum</i>       |       |       |      |       |      |      |      |        | 15    |       |      |
| <i>Aurelia limbata</i>           |       |       |      |       |      |      |      | 1      |       |       |      |
| <i>Aglaura hemistoma</i>         |       |       |      |       |      |      |      |        |       | 1     |      |
| <i>Diphyes appendicurata</i>     |       |       |      |       |      |      |      | 1      |       |       |      |
| <i>Salpa</i> sp                  |       |       |      | 1     | 2    | 5    |      |        | 2     | 1     |      |
| <i>Muggiaea</i> sp               |       |       | 23   |       |      |      | 1    |        |       |       |      |
| <i>Balanus</i> larva             |       |       |      |       |      |      |      |        | 4     |       |      |
| <i>Creseis acicula</i>           |       |       |      |       |      |      |      |        | 230   | 1.398 | 120  |
| <i>Pteropoda</i> sp              |       |       |      |       |      |      |      |        | 7     | 2     | 2    |
| <i>Sagitta bedoti</i>            |       |       |      |       |      |      |      |        |       | 1     |      |
| <i>Sagitta</i> larva             |       |       |      |       |      |      | 2    |        |       | 4     | 5    |
| <i>Sagitta</i> sp                | 3     |       |      | 1     |      |      |      |        |       |       |      |

## B. 208 선 부유생물조사표

Plankton Data, Line 208

| Month                            | March |       |      | August |      |      |      |       |
|----------------------------------|-------|-------|------|--------|------|------|------|-------|
| Station                          | 01    | 03    | 05   | 02     | 04   | 06   | 08   | 10    |
| Date                             | 3     | 3     | 2    | 16     | 15   | 15   | 15   | 15    |
| Time                             | 1350  | 1100  | 2250 | 0050   | 2110 | 1730 | 1325 | 0945  |
| Collected depth(m)               | 50    | 50    | 50   | 100    | 150  | 120  | 130  | 100   |
| Volume(cc)                       | 10.5  | 10.0  | 3.0  | 13.0   | 11.0 | 16.0 | 12.0 | 17.0  |
| Biomass(mg/m <sup>3</sup> )      | 187.4 | 262.9 | 24   | 385    | 90.2 | 81.6 | 78   | 132.7 |
| Rate of subsample                | 1/16  | 1/16  | 1/4  | 1/32   | 1/64 | 1/32 | 1/64 | 1/64  |
| No. of total organisms           | 83    | 304   | 659  | 323    | 807  | 336  | 369  | 508   |
| No. of total the other organisms | —     | —     | —    | —      | —    | —    | —    | —     |

## ZOOPLANKTON

|                           |    |     |     |    |    |    |    |    |
|---------------------------|----|-----|-----|----|----|----|----|----|
| Calanus helgolandicus     | 2  | 4   | 9   | 2  | 1  |    | 2  |    |
| Calanus helgolandicus juv |    |     |     | 6  | 4  | 7  | 1  |    |
| Calanus plumchris         |    |     |     |    |    |    | 1  |    |
| Calanus tenuicornis       |    |     |     | 1  |    |    |    |    |
| Calanus tenuicornis juv   |    |     |     | 1  |    | 1  | 2  | 1  |
| Calanus minor             |    |     | 3   |    | 1  | 2  |    |    |
| Calanus larva             | 2  | 4   | 5   | 7  | 6  | 3  |    |    |
| Eucalanus mucronatus      |    |     |     |    |    |    |    | 1  |
| Eucalanus larva           |    | 1   |     |    |    |    | 1  | 1  |
| Rhincalanus nasutus       |    |     |     |    |    | 3  | 1  |    |
| Paracalanus parvus        | 35 | 152 | 512 | 80 | 92 | 61 | 28 | 5  |
| Paracalanus aculeatus     |    |     | 2   |    |    | 2  | 1  | 7  |
| Acrocalanus gibber        |    |     |     |    |    |    | 1  |    |
| Calocalanus plumulosus    |    |     |     |    |    | 1  |    | 1  |
| Calocalanus pavo          |    |     |     |    |    |    |    | 2  |
| Clausocalanus pergens     |    | 2   | 10  | 6  | 1  | 7  | 4  | 9  |
| Ctenocalanus vanus        |    | 2   | 13  |    | 11 | 7  | 13 | 2  |
| Pseudocalanus minutus     |    |     | 1   | 12 |    |    |    | 1  |
| Euchaeta larva            |    |     | 5   |    | 3  |    | 2  |    |
| Scolecithricella minor    |    |     |     |    |    |    | 1  |    |
| Centropages abdominalis   | 1  |     |     |    |    |    |    |    |
| Centropages bradyi        |    |     |     |    |    |    | 1  |    |
| Centropages yamadai       |    |     |     |    |    |    |    | 1  |
| Mecynocera clausi         |    |     |     |    |    |    | 1  |    |
| Temora discaudata         |    |     |     |    |    |    | 1  |    |
| Temora stylifera          |    |     |     |    |    |    | 3  |    |
| Temora larva              |    |     |     |    |    |    | 2  |    |
| Candacia bipinnata        |    |     |     |    |    | 1  | 1  |    |
| Candacia larva            |    | 1   |     | 1  |    | 2  | 1  |    |
| Metridia lucens           |    |     | 3   |    |    |    |    |    |
| Metridia larva            |    |     |     | 1  | 1  |    |    |    |
| Lucicutia flavicornis     |    |     | 1   |    |    |    |    |    |
| Pleuromamma gracilis      |    |     |     |    | 1  | 1  |    |    |
| Acartia clausi            |    |     | 2   | 15 | 17 | 1  | 1  |    |
| Acartia danae             |    |     |     |    |    |    | 1  | 1  |
| Acartia erythraea         |    |     |     |    |    | 1  |    |    |
| Acartia spinicauda        |    |     |     |    |    | 1  |    |    |
| Acartia larva             |    |     |     | 2  |    |    |    |    |
| Acartia sp                |    |     |     |    | 1  |    |    |    |
| Oithona plumifera         | 6  | 16  | 40  | 20 | 12 | 11 | 5  | 9  |
| Oithona larva             | 1  | 10  | 6   | 2  | 3  | 1  |    | 2  |
| Oncaea venusta            | 2  | 1   | 7   |    | 3  | 10 | 11 | 13 |
| Corycaeus affinis         | 8  | 13  | 10  | 13 | 6  | 6  | 1  | 4  |
| Corycaeus ovalis          |    |     |     |    |    |    |    | 1  |
| Copepoda larva            | 4  | 54  | 10  | 8  | 4  | 9  | 2  | 7  |
| Copepoda sp               | 5  |     |     |    |    |    |    |    |

| Month                            | May  |      |      | June |      |      |
|----------------------------------|------|------|------|------|------|------|
| Station                          | 01   | 03   | 05   | 02   | 04   | 06   |
| Date                             | 7    | 7    | 7    | 8    | 8    | 8    |
| Time                             | 0625 | 0845 | 1140 | 0715 | 1025 | 1330 |
| Collected depth(m)               | 50   | 50   | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 3.0  | 0.1  | 7.0  | 0.1  | 3.0  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 78.5 | 稀    | 72.3 | 29.5 | 50   | 53   |
| Rate of subsample                | —    | —    | —    | —    | —    | —    |
| No. of total organisms           | —    | —    | —    | —    | —    | —    |
| No. of total the other organisms | —    | —    | —    | —    | —    | —    |

| September |      |      | October |      |      |
|-----------|------|------|---------|------|------|
| 01        | 03   | 05   | 01      | 03   | 05   |
| 22        | 23   | 22   | 7       | 7    | 7    |
| 1125      | 0305 | 2315 | 0655    | 0950 | 1335 |
| 50        | 50   | 50   | 50      | 50   | 50   |
| 少         | 0.1  | 0.8  | 5.0     | 1.2  | 4.5  |
| 12.5      | 7.8  | 6.7  | 88.5    | 48.8 | 81   |
| —         | —    | —    | —       | —    | —    |
| —         | —    | —    | —       | —    | —    |
| —         | —    | —    | —       | —    | —    |

| Month                            | November |      |      |      | December |      |      |      |
|----------------------------------|----------|------|------|------|----------|------|------|------|
| Station                          | 01       | 03   | 05   | 07   | 02       | 04   | 06   | 08   |
| Date                             | 4        | 4    | 4    | 4    | 11       | 11   | 11   | 11   |
| Time                             | 0740     | 1230 | 1645 | 2020 | 1150     | 2010 | 1640 | 1350 |
| Collected depth(m)               | 50       | 50   | 50   | 50   | 120      | 150  | 110  | 120  |
| Volume(cc)                       | 0.8      | 13.0 | 5.0  | 0.4  | 4.0      | 1.2  | 6.0  | 4.0  |
| Biomass(mg/m <sup>3</sup> )      | 24       | 21.3 | 33   | 8.8  | 47       | 12.2 | 83   | —    |
| Rate of subsample                | —        | —    | —    | —    | —        | —    | —    | —    |
| No. of total organisms           | —        | —    | —    | —    | —        | —    | —    | —    |
| No. of total the other organisms | —        | —    | —    | —    | —        | —    | —    | —    |

| Month                            | March |       |      | August |      |      |      |       |
|----------------------------------|-------|-------|------|--------|------|------|------|-------|
| Station                          | 01    | 03    | 05   | 02     | 04   | 06   | 08   | 10    |
| Date                             | 3     | 3     | 2    | 16     | 15   | 15   | 15   | 15    |
| Time                             | 1350  | 1100  | 2250 | 0050   | 2110 | 1730 | 1325 | 0945  |
| Collected depth(m)               | 50    | 50    | 50   | 100    | 150  | 120  | 130  | 100   |
| Volume(cc)                       | 10.5  | 10.0  | 3.0  | 13.0   | 11.0 | 16.0 | 12.0 | 17.0  |
| Biomass(mg/m <sup>3</sup> )      | 187.4 | 262.9 | 24   | 385    | 90.2 | 81.6 | 78   | 132.7 |
| Rate of subsample                | 1/16  | 1/16  | 1/4  | 1/32   | 1/64 | 1/32 | 1/64 | 1/64  |
| No. of total organisms           | 83    | 304   | 659  | 323    | 807  | 336  | 369  | 508   |
| No. of total the other organisms | —     | —     | —    | —      | —    | —    | —    | —     |
| <b>ZOOPLANKTON</b>               |       |       |      |        |      |      |      |       |
| Oikopleura sp                    |       | 13    |      | 27     | 117  | 32   | 17   | 10    |
| Penilia schmackeri               |       |       |      |        | 3    | 41   | 125  | 252   |
| Evadne tergestina                |       |       |      | 50     | 430  | 36   | 32   | 12    |
| Conchoecia elegans               |       |       |      |        | 1    | 5    | 7    | 1     |
| Conchoecia sp                    |       |       | 2    |        |      |      |      |       |
| Noctiluca scintillans            |       |       |      | 1      |      |      | 61   | 5     |
| Ophiopluteus larva               |       | 2     |      | 2      |      |      |      |       |
| Polychaeta larva                 |       |       |      | 1      |      | 1    |      |       |
| Parafavella denticulata          |       |       |      |        |      |      | 1    |       |
| Fish larva                       |       |       |      | 3      |      |      |      |       |
| Fish egg                         |       |       |      | 4      | 4    |      |      |       |
| Macrurus sp                      |       |       | 1    |        |      |      |      |       |
| Pelagic egg                      |       | 12    | 2    | 1      | 3    | 30   | 18   | 18    |
| Hyperia galba                    |       |       |      |        | 13   | 1    |      |       |
| Themisto gracilipes              |       |       |      |        | 13   |      |      |       |
| Themisto sp                      |       |       |      | 1      | 1    |      |      |       |
| Parathemisto sp                  | 2     |       |      |        |      |      |      |       |
| Oxycephalus porcellus            |       |       |      | 1      |      |      |      |       |
| Amphipoda larva                  |       |       |      |        | 2    |      |      |       |
| Euphausia pacifica               |       |       |      |        |      | 2    |      |       |
| Euphausia pacifica larva         |       |       |      |        | 3    |      |      |       |
| Euphausia larva                  | 2     | 1     | 1    | 4      | 21   | 4    | 1    | 2     |
| Pandalid sp                      |       |       |      |        |      |      |      | 1     |
| Mysidae sp                       |       |       |      | 1      |      |      |      |       |
| Lucifer raynaudii                |       |       |      |        | 7    | 10   | 1    | 10    |
| Thalassinid sp                   | 3     |       |      |        |      |      |      |       |
| Muggiaea atlantica               |       | 1     | 14   | 9      | 4    |      |      |       |
| Muggiaea sp                      |       |       |      | 8      |      | 1    | 3    |       |
| Megalopa larva                   |       |       |      |        | 1    |      |      |       |
| Squilla sp                       |       |       |      |        |      | 1    |      |       |
| Doliolum nationalis              |       |       |      | 2      |      |      |      | 15    |
| Salpa fusiformis                 |       |       |      | 25     |      |      |      |       |
| Liriope tetraphylla              |       |       |      |        |      |      | 1    | 1     |
| Aglaula hemistoma                |       |       |      |        |      | 4    |      |       |
| Salpa sp                         |       |       |      |        |      |      | 1    |       |
| Balanus larva                    | 8     |       |      | 1      | 1    | 5    |      | 2     |
| Creseis acicula                  |       |       |      | 1      |      | 3    |      | 2     |
| Sagitta bedoti                   |       |       |      |        | 5    |      |      |       |
| Sagitta enflata                  |       |       |      |        | 1    | 1    |      | 2     |
| Sagitta crassa                   |       |       |      |        | 1    |      |      |       |
| Sagitta larva                    | 2     |       |      | 10     |      |      |      |       |

| Month                            | May  |      |      | June |      |      |
|----------------------------------|------|------|------|------|------|------|
| Station                          | 01   | 03   | 05   | 02   | 04   | 06   |
| Date                             | 7    | 7    | 7    | 8    | 8    | 8    |
| Time                             | 0625 | 0845 | 1140 | 0715 | 1025 | 1330 |
| Collected depth(m)               | 50   | 50   | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 3.0  | 0.1  | 7.0  | 0.1  | 3.0  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 78.5 | 稀    | 72.3 | 29.5 | 50   | 53   |
| Rate of subsample                | —    | —    | —    | —    | —    | —    |
| No. of total organisms           | —    | —    | —    | —    | —    | —    |
| No. of total the other organisms | —    | —    | —    | —    | —    | —    |

| September |      |      | October |      |      |
|-----------|------|------|---------|------|------|
| 01        | 03   | 05   | 01      | 03   | 05   |
| 22        | 23   | 22   | 7       | 7    | 7    |
| 1125      | 0305 | 2315 | 0655    | 0950 | 1335 |
| 50        | 50   | 50   | 50      | 50   | 50   |
| 少         | 0.1  | 0.8  | 5.0     | 1.2  | 4.5  |
| 12.5      | 7.8  | 6.7  | 88.5    | 48.8 | 81   |
| —         | —    | —    | —       | —    | —    |
| —         | —    | —    | —       | —    | —    |
| —         | —    | —    | —       | —    | —    |



| Month                            | November |      |      |      | December |      |      |      |
|----------------------------------|----------|------|------|------|----------|------|------|------|
| Station                          | 01       | 03   | 05   | 07   | 02       | 04   | 06   | 08   |
| Date                             | 4        | 4    | 4    | 4    | 11       | 11   | 11   | 11   |
| Time                             | 0740     | 1230 | 1645 | 2020 | 1150     | 2010 | 1640 | 1350 |
| Collected depth(m)               | 50       | 50   | 50   | 50   | 120      | 150  | 110  | 120  |
| Volume(cc)                       | 0.8      | 13.0 | 5.0  | 0.4  | 4.0      | 1.2  | 6.0  | 4.0  |
| Biomass(mg/m <sup>3</sup> )      | 24       | 21.3 | 33   | 8.8  | 47       | 12.2 | 83   | —    |
| Rate of subsample                | —        | —    | —    | —    | —        | —    | —    | —    |
| No. of total organisms           | —        | —    | —    | —    | —        | —    | —    | —    |
| No. of total the other organisms | —        | —    | —    | —    | —        | —    | —    | —    |



| Month                            | May  |      |      | June  |      |      |
|----------------------------------|------|------|------|-------|------|------|
| Station                          | 01   | 03   | 05   | 01    | 03   | 05   |
| Date                             | 5    | 5    | 5    | 9     | 9    | 8    |
| Time                             | 1645 | 1500 | 1250 | 0350  | 0215 | 1850 |
| Collected depth(m)               | 50   | 50   | 50   | 50    | 50   | 50   |
| Volume(cc)                       | 2.5  | 3.0  | 2.5  | 5.5   | 1.2  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 41   | 22.5 | 32.7 | 131.8 | 31.6 | 97.5 |
| Rate of subsample                | —    | —    | —    | —     | —    | —    |
| No. of total organisms           | —    | —    | —    | —     | —    | —    |
| No. of total the other organisms | —    | —    | —    | —     | —    | —    |

| Month                            | September |      |      | October |       |       |
|----------------------------------|-----------|------|------|---------|-------|-------|
| Station                          | 01        | 03   | 05   | 01      | 03    | 05    |
| Date                             | 22        | 22   | 22   | 9       | 9     | 7     |
| Time                             | 1115      | 1310 | 1800 | 0840    | 1032  | 2000  |
| Collected depth(m)               | 50        | 50   | 50   | 50      | 50    | 50    |
| Volume(cc)                       | 1.2       | 3.0  | 0.4  | 2.5     | 6.2   | 8.0   |
| Biomass(mg/m <sup>3</sup> )      | 22.7      | 44   | 19.2 | 15.5    | 161.3 | 192.8 |
| Rate of subsample                | —         | —    | —    | —       | —     | —     |
| No. of total organisms           | —         | —    | —    | —       | —     | —     |
| No. of total the other organisms | —         | —    | —    | —       | —     | —     |

| November |      |      | December |      |      |      |
|----------|------|------|----------|------|------|------|
| 01       | 03   | 05   | 01       | 03   | 05   | 07   |
| 6        | 6    | 6    | 21       | 21   | 21   | 11   |
| 1115     | 1310 | 1510 | 1330     | 1115 | 0910 | 0640 |
| 50       | 50   | 50   | 75       | 100  | 150  | 50   |
| 2.5      | 0.8  | 0.8  | 3.0      | 2.5  | 1.7  | 2.5  |
| 20.4     | 稀    | 14.9 | 23       | 30.7 | 22   | 65   |
|          |      |      |          |      |      |      |
|          |      |      |          |      |      |      |
|          |      |      |          |      |      |      |
|          |      |      |          |      |      |      |

| Month                            | May  |      |      | June  |      |      |
|----------------------------------|------|------|------|-------|------|------|
| Station                          | 01   | 03   | 05   | 01    | 03   | 05   |
| Date                             | 5    | 5    | 5    | 9     | 9    | 8    |
| Time                             | 1645 | 1500 | 1250 | 0350  | 0215 | 1850 |
| Collected depth(m)               | 50   | 50   | 50   | 50    | 50   | 50   |
| Volume(cc)                       | 2.5  | 3.0  | 2.5  | 5.5   | 1.2  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 41   | 22.5 | 32.7 | 131.8 | 31.6 | 97.5 |
| Rate of subsample                | —    | —    | —    | —     | —    | —    |
| No. of total organisms           | —    | —    | —    | —     | —    | —    |
| No. of total the other organisms | —    | —    | —    | —     | —    | —    |

| Month                            | March |       |       | August |       |      |      |       |      |      |
|----------------------------------|-------|-------|-------|--------|-------|------|------|-------|------|------|
| Station                          | 01    | 03    | 05    | 01     | 03    | 05   | 07   | 09    | 11   | 13   |
| Date                             | 5     | 5     | 5     | 14     | 14    | 14   | 14   | 14    | 15   | 15   |
| Time                             | 2100  | 1930  | 1735  | 0915   | 1115  | 0550 | 1825 | 2220  | 0200 | 0515 |
| Collected depth(m)               | 50    | 50    | 50    | 50     | 50    | 150  | 90   | 110   | 110  | 78   |
| Volume(cc)                       | 4.0   | 11.0  | 20.0  | 7.0    | 7.0   | 11.0 | 5.0  | 20.0  | 9.0  | 9.0  |
| Biomass(mg/m <sup>3</sup> )      | 41.9  | 174.1 | 363.8 | 147.2  | 150.1 | 76.3 | 38.5 | 158.5 | 79.4 | 94.5 |
| Rate of subsample                | 1/16  | 1/32  | 1/32  | 1/32   | 1/32  | 1/6  | 1/32 | 1/32  | 1/32 | 1/32 |
| No. of total organisms           | 193   | 182   | 288   | 321    | 396   | 154  | 271  | 97    | 257  | 486  |
| No. of total the other organisms | —     | —     | —     | —      | —     | —    | —    | —     | —    | —    |

# ZOOPLANKTON

|                          |    |    |    |    |     |    |    |   |    |      |
|--------------------------|----|----|----|----|-----|----|----|---|----|------|
| Corycaeus crassiusculus  |    |    |    |    |     |    |    |   | 3  |      |
| Corycaeus speciosus      |    |    |    |    |     |    |    |   |    | 1    |
| Corycaeus latus          |    |    |    |    |     |    |    |   |    | 1    |
| Corycaeus sp             |    |    |    |    |     |    |    |   |    |      |
| Copilia quadrata         |    |    |    |    |     |    |    |   | 1  |      |
| Sapphirina intestina     |    |    |    |    |     |    |    | 2 | 1  |      |
| Copepoda larva           | 13 | 22 | 27 | 10 | 13  | 5  | 4  | 1 | 6  | 8    |
| Copepoda sp              |    |    |    |    |     | 2  |    |   |    |      |
| Oikopleura sp            | 6  |    | 7  | 20 | 14  | 5  | 3  | 3 | 11 | 8    |
| Penilia schmackeri       |    |    |    | 48 | 4   | 1  | 1  |   | 19 | 30.1 |
| Evadne tergestina        |    |    |    | 4  | 142 | 6  | 37 |   | 4  | 3    |
| Ophiopluteus larva       |    | 4  |    | 5  |     |    |    |   | 3  | 5    |
| Ophiopluteus sp          |    |    | 1  |    |     |    |    |   |    |      |
| Conchoecia elegans       |    | 2  |    |    | 4   | 1  |    |   | 3  | 3    |
| Conchoecia sp            | 1  |    |    |    |     |    |    |   |    |      |
| Polychaeta larva         |    |    |    | 1  |     | 1  |    |   | 2  | 3    |
| Polychaeta sp            | 1  |    |    |    |     |    |    |   |    |      |
| Fish larva               |    |    |    | 1  | 1   |    |    |   |    |      |
| Fish egg                 |    |    |    | 4  | 2   | 3  | 2  |   |    | 1    |
| Shell larva              |    |    | 1  |    |     |    |    |   |    |      |
| Pelagic egg              | 1  | 7  | 6  |    |     |    | 19 |   | 20 | 7    |
| Hyperia galba            |    |    |    |    | 1   | 3  |    | 1 | 6  |      |
| Hyperia schizogoneios    |    |    |    |    |     | 4  |    | 2 | 6  |      |
| Hyperoche medusarum      |    |    |    |    |     |    |    |   | 3  |      |
| Hyperia sp               |    |    |    |    |     | 1  |    | 2 |    |      |
| Themisto gracilipes      |    |    |    |    | 1   | 6  |    |   | 1  |      |
| Themisto sp              |    |    |    |    |     |    |    | 1 |    |      |
| Phronimella elongata     |    |    |    |    |     | 1  |    |   |    |      |
| Phronima sedentaria      |    |    |    |    |     |    |    |   | 1  |      |
| Amphipoda larva          |    |    |    |    |     | 1  |    |   | 1  |      |
| Euphausia pacifica       |    |    |    |    |     |    | 1  |   |    |      |
| Euphausia pacifica larva |    |    |    |    |     | 2  |    | 4 | 1  |      |
| Euphausia larva          | 10 | 2  | 19 | 23 | 30  | 11 | 16 | 6 |    | 1    |
| Leptochela sydniensis    |    |    |    |    |     |    |    |   |    | 2    |
| Thalassinid larva        |    |    |    |    |     |    |    |   |    | 4    |
| Euphausia sp             | 4  |    |    |    |     | 1  |    | 2 | 1  | 1    |
| pandalid sp              |    |    |    |    |     | 1  | 3  | 3 |    | 1    |
| Lucifer raynaudii        |    |    |    | 1  | 76  | 5  | 9  |   | 5  | 12   |
| Plagusia dentipes        |    |    | 2  | 1  |     |    |    |   |    | 4    |
| Muggiaea atlantica       |    |    |    |    | 2   |    | 1  |   |    |      |
| Muggiaea sp              |    |    |    | 6  | 11  |    | 3  |   |    | 3    |
| Megalopa larva           |    |    |    |    |     |    |    |   |    | 2    |
| Brachyura larva          |    | 1  |    |    |     |    |    |   |    | 3    |
| Squillar sp              |    |    |    |    |     |    |    |   |    | 1    |
| Fritillaria borealis     |    |    |    |    |     |    |    |   | 5  |      |
| Doliolum nationalis      |    |    |    |    |     |    |    |   | 9  |      |
| Oberia geniculata        |    |    |    | 4  | 3   |    |    |   |    |      |
| Phyllirhoe bucephala     |    |    |    |    |     |    |    |   | 2  | 1    |
| Salpa sp                 |    |    |    |    |     |    | 2  |   |    | 2    |
| Balanus larva            | 2  |    |    | 38 | 2   |    | 1  |   |    |      |
| Pteropoda sp             |    |    |    | 1  |     |    |    |   | 4  | 4    |
| Favella sp               |    |    |    | 5  | 5   |    |    |   |    |      |
| Sagitta enflata          |    |    |    |    |     |    |    |   |    |      |
| Sagitta larva            |    |    |    |    |     | 8  | 4  | 4 | 5  | 7    |
| Sagitta sp               |    |    |    | 15 | 3   |    |    |   |    |      |

| September |      |      | October |       |       |
|-----------|------|------|---------|-------|-------|
| 01        | 03   | 05   | 01      | 03    | 05    |
| 22        | 22   | 22   | 9       | 9     | 7     |
| 1115      | 1310 | 1800 | 0640    | 1032  | 2000  |
| 50        | 50   | 50   | 50      | 50    | 50    |
| 1.2       | 3    | 0.4  | 2.5     | 6.2   | 8.0   |
| 22.7      | 44   | 19.2 | 15.5    | 161.3 | 192.8 |
| —         | —    | —    | —       | —     | —     |
| —         | —    | —    | —       | —     | —     |
| —         | —    | —    | —       | —     | —     |



| Month                            | November |      |      | December |      |      |      |
|----------------------------------|----------|------|------|----------|------|------|------|
| Station                          | 01       | 03   | 05   | 01       | 03   | 05   | 07   |
| Date                             | 6        | 6    | 6    | 21       | 21   | 21   | 11   |
| Time                             | 1115     | 1310 | 1510 | 1330     | 1115 | 0910 | 0640 |
| Collected depth(m)               | 50       | 50   | 50   | 75       | 100  | 150  | 50   |
| Volume(cc)                       | 2.5      | 0.8  | 0.8  | 3.0      | 25.0 | 1.7  | 2.5  |
| Biomass(mg/m <sup>3</sup> )      | 20.4     | 稀    | 14.9 | 23       | 30.7 | 22   | 65   |
| Rate of subsample                | —        | —    | —    | —        | —    | —    | —    |
| No. of total organisms           | —        | —    | —    | —        | —    | —    | —    |
| No. of total the other organisms | —        | —    | —    | —        | —    | —    | —    |

## D. 206 선 부유생물조사표

Plankton Data, Line 206

| Month                            | March |       |       | May  |      |      | June |      |      |
|----------------------------------|-------|-------|-------|------|------|------|------|------|------|
| Station                          | 01    | 02    | 03    | 01   | 03   | 04   | 01   | 02   | 03   |
| Date                             | 14    | 14    | 14    | 5    | 5    | 5    | 12   | 12   | 12   |
| Time                             | 0730  | 0620  | 0440  | 0435 | 0707 | 0835 | 0720 | 0530 | 0405 |
| Collected depth(m)               | 50    | 50    | 50    | 50   | 50   | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 30.0  | 18.0  | 14.0  | 3.5  | 2.5  | 5.0  | 少    | 5.0  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 228.1 | 236.7 | 115.7 | 61   | 16.8 | 51.5 | 5.8  | 12.6 | 40.7 |
| Rate of subsample                | 1/8   | 1/8   | 1/8   | —    | —    | —    | —    | —    | —    |
| No. of total organisms           | 281   | 352   | 223   | —    | —    | —    | —    | —    | —    |
| No. of total the other organisms | —     | —     | —     | —    | —    | —    | —    | —    | —    |
| ZOOPLANKTON                      |       |       |       |      |      |      |      |      |      |
| Calanus helgolandicus            | 13    | 36    | 3     |      |      |      |      |      |      |
| Calanus helgolandicus juv        | 10    | 4     | 7     |      |      |      |      |      |      |
| Undinula vulgaris                |       |       | 1     |      |      |      |      |      |      |
| Calanus larva                    |       |       | 4     |      |      |      |      |      |      |
| Ctenocalanus vanus               | 3     | 1     |       |      |      |      |      |      |      |
| Euchaeta larva                   | 1     |       |       |      |      |      |      |      |      |
| Euchaeta sp                      |       | 2     |       |      |      |      |      |      |      |
| Centropages abdominalis          | 4     | 8     | 1     |      |      |      |      |      |      |
| Centropages sp                   | 6     |       | 3     |      |      |      |      |      |      |
| Centropages larva                |       | 2     |       |      |      |      |      |      |      |
| Lucicutia flavicornis            |       | 1     |       |      |      |      |      |      |      |
| Candacia larva                   | 1     |       |       |      |      |      |      |      |      |
| Acartia clausi                   | 1     |       |       |      |      |      |      |      |      |
| Oithona plumifera                | 9     | 2     | 2     |      |      |      |      |      |      |
| Oithona nana                     |       | 16    | 8     |      |      |      |      |      |      |
| Oithona larva                    | 6     | 15    | 5     |      |      |      |      |      |      |
| Oncaea venusta                   | 1     | 3     | 2     |      |      |      |      |      |      |
| Corycaeus affinis                | 12    | 16    | 4     |      |      |      |      |      |      |
| Noctiluca scintillans            |       | 16    | 57    |      |      |      |      |      |      |
| Copepoda larva                   | 24    | 16    | 23    |      |      |      |      |      |      |
| Oikopleura sp                    | 3     | 19    | 16    |      |      |      |      |      |      |
| Ophiopluteus sp                  | 3     | 4     | 1     |      |      |      |      |      |      |
| Conchoecia sp                    | 8     | 4     | 2     |      |      |      |      |      |      |
| Polychaeta sp                    | 1     | 2     |       |      |      |      |      |      |      |
| Brachyura larva                  |       | 1     |       |      |      |      |      |      |      |
| Shell larva                      |       | 1     |       |      |      |      |      |      |      |
| Bipinnaria larva                 |       |       | 1     |      |      |      |      |      |      |
| Fish egg                         |       |       | 4     |      |      |      |      |      |      |
| Pelagic egg                      | 2     | 2     | 3     |      |      |      |      |      |      |
| Euphausia larva                  | 17    | 2     |       |      |      |      |      |      |      |
| Euphausia sp                     | 2     | 2     |       |      |      |      |      |      |      |
| Muggiaea sp                      |       | 5     | 5     |      |      |      |      |      |      |

## E. 205 선 부유생물조사표

## Plankton Data, Line 205

| Month                            | March |      |      | Mcy  |      |      |      |
|----------------------------------|-------|------|------|------|------|------|------|
| Station                          | 01    | 03   | 05   | 01   | 03   | 05   | 01   |
| Date                             | 15    | 15   | 14   | 4    | 4    | 4    | 13   |
| Time                             | 0520  | 0235 | 1830 | 1140 | 1415 | 1815 | 0025 |
| Collected depth(m)               | 50    | 50   | 50   | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 0.7   | 2.0  | 1.5  | 5.0  | 15.0 | 7.0  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 5.5   | 10.4 | 62.9 | 72   | 稀    | 93.5 | 68.7 |
| Rate of subsample                | 1/2   | 1    | 1/2  | —    | —    | —    | —    |
| No. of total organisms           | 133   | 72   | 264  | —    | —    | —    | —    |
| No. of total the other organisms | —     | —    | —    | —    | —    | —    | —    |

## ZOOPLANKTON

*Calanus helgolandicus*  
*Calanus helgolandicus* juv  
*Calanus tenuicornis*  
*Calanus* larva

2  
 4  
 1  
 1  
 5  
 1

*Paracalanus parvus*  
*Paracalanus aculeatus*  
*Clausocalanus porgens*  
*Ctenocalanus vanus*  
*Pareuchaeta elongata*

62  
 43  
 1  
 1  
 2  
 2  
 1  
 1

*Euchaeta concinna*  
*Euchaeta flava*  
*Euchaeta* larva  
*Centropages* larva  
*Pleuromamma* sp

1  
 1  
 1  
 8  
 3  
 1  
 1

*Candacia bipinnata*  
*Oithona plumifera*  
*Oithona nana*  
*Oithona* larva  
*Oncaea venusta*

1  
 3  
 2  
 5  
 7  
 4  
 11  
 6

*Corycaeus affinis*  
*Copepoda* larva  
*Copepoda* sp  
*Oikopleura* sp  
*Ophiopluteus* sp

1  
 2  
 3  
 17  
 4  
 33  
 1

*Conchoecia* sp  
*Noctiluca scintillans*  
*Polychaeta* larva  
*Fish* larva  
*Pelegic* egg

1  
 15  
 1  
 1  
 2  
 1  
 3  
 7

*Fritillaria* sp  
*Euphausia* larva  
*Lucifer raynaudii*  
*Euphausia* sp  
*Brachyura* larva

2  
 2  
 1  
 1  
 8  
 2

*Salpa fusiformis*  
*Muggiaea atlantica*  
*Diphyes appendiculata*  
*Obelia geniculata*  
*Sagitta* sp

1  
 3  
 1  
 3  
 1



# F. 204 선 부유생물조사표

## Plankton Data, Line 204

| Month                           | March |      |      | August |      |      |
|---------------------------------|-------|------|------|--------|------|------|
| Station                         | 01    | 03   | 05   | 01     | 03   | 05   |
| Date                            | 15    | 15   | 21   | 10     | 10   | 10   |
| Time                            | 0555  | 0905 | 1035 | 0730   | 1100 | 1005 |
| Collected depth(m)              | 50    | 40   | 50   | 50     | 50   | 50   |
| Volume(cc)                      | 0.1   | 1.0  | 2.5  | 7.0    | 少    | 6.0  |
| Biomass(mg/m <sup>3</sup> )     | 5.5   | 16   | 64.1 | 74.3   | 稀    | 53.6 |
| Rate of subsample               | 1/2   | 1/4  | 1/16 | 1/32   | 1    | 1/32 |
| No. of total organisms          | 23    | 232  | 254  | 200    | 76   | 253  |
| No. of total the othe organisms | —     | —    | —    | —      | —    | —    |

### ZOOPLANKTON

|                           |    |     |     |    |    |    |
|---------------------------|----|-----|-----|----|----|----|
| Calanus helgolandicus     | 4  | 1   |     | 4  | 5  |    |
| Calanus helgolandicus juv |    |     |     |    | 3  | 1  |
| Calanus tenuicornis       |    | 1   |     |    |    |    |
| Calanus tenuicornis juv   |    |     | 3   |    |    |    |
| Undinula darwinii         |    | 1   |     |    |    |    |
| Calanus larva             |    | 2   | 1   |    |    |    |
| Calanus sp                |    |     | 1   |    |    |    |
| Eucalanus mucronatus juv  |    |     | 1   |    |    |    |
| Eucalanus larva           |    |     | 1   |    |    |    |
| Eucalanus sp              |    |     | 4   |    |    |    |
| Paracalanus parvus        | 21 | 165 | 151 | 31 | 30 | 97 |
| Acrocalanus gibber        |    |     |     | 1  |    |    |
| Clausocalanus pergens     |    | 2   | 2   |    |    |    |
| Clausocalanus arcuicornis |    |     |     |    | 1  | 5  |
| Gtenocalanus vanus        |    |     | 7   |    | 1  | 12 |
| Pareuchaeta elongata      | 1  | 4   |     |    |    | 2  |
| Euchaeta marina           |    | 1   |     |    |    |    |
| Euchaeta larva            | 1  | 8   | 2   | 1  | 1  | 7  |
| Scolecithricella minor    |    |     |     | 1  |    |    |
| Scolecithrix danae        |    |     | 2   |    |    |    |
| Centropages abdominalis   |    |     |     | 1  |    |    |
| Centropages yamadai       |    |     |     | 4  |    |    |
| Centropages larva         |    |     |     | 2  | 1  |    |
| Metridia larva            |    |     |     |    | 2  |    |
| Candacia larva            |    |     | 1   |    | 2  | 1  |
| Labidocera larva          |    |     |     | 1  |    |    |
| Acartia clausi            |    |     |     |    | 4  | 33 |
| Acartia larva             |    |     |     |    | 1  | 6  |
| Tortanus forcipatus       |    |     |     | 1  |    |    |
| Tortanus larva            |    |     |     |    | 3  |    |
| Oithona plumifera         |    | 8   | 9   |    |    |    |
| Oithona nana              |    | 8   | 4   |    |    | 10 |
| Oithona similis           |    | 2   |     |    |    |    |
| Oithona larva             | 1  |     |     | 2  | 1  | 3  |
| Oncaea venusta            |    | 8   | 21  |    |    | 1  |
| Corycaeus affinis         |    | 2   |     | 22 | 4  | 8  |
| Copepoda larva            | 1  | 2   |     |    | 3  | 1  |
| Copepoda sp               |    | 1   | 1   |    |    |    |
| Oikopleura sp             | 1  | 15  | 8   | 10 |    | 4  |
| Ophiopluteus sp           | 1  |     | 2   |    |    |    |
| Evadne tergestina         |    |     |     | 19 | 5  | 3  |
| Penilia schmackeri        |    |     |     | 12 |    |    |
| Conchoecia elegans        |    |     |     | 2  |    |    |
| Noctiluca scintillans     | 22 |     |     |    |    |    |

| Moy  |      |      | June |      |      |
|------|------|------|------|------|------|
| 01   | 03   | 05   | 01   | 03   | 05   |
| 4    | 4    | 1    | 18   | 13   | 14   |
| 1110 | 0830 | 1805 | 0115 | 0450 | 1350 |
| 50   |      | 50   | 50   | 50   | 50   |
| 1.5  | 1.5  | 3.0  | 少    | 少    | 1.0  |
| 45.3 | 21.3 | 43.7 | 13.5 | 26.8 | 74.9 |
|      |      |      |      |      |      |
|      |      |      |      |      |      |
|      |      |      |      |      |      |

| Month                            | March |      |      | August |      |      |
|----------------------------------|-------|------|------|--------|------|------|
| Station                          | 01    | 03   | 05   | 01     | 03   | 05   |
| Date                             | 15    | 15   | 21   | 10     | 10   | 10   |
| Time                             | 0555  | 0905 | 1035 | 0730   | 1100 | 1005 |
| Collected depth(m)               | 50    | 40   | 50   | 50     | 50   | 50   |
| Volume(cc)                       | 0.1   | 1.0  | 2.5  | 7.0    | 少    | 6.0  |
| Biomass(mg/m <sup>3</sup> )      | 5.5   | 16   | 64.1 | 74.3   | 稀    | 53.6 |
| Rate of subsample                | 1/2   | 1/4  | 1/16 | 1/32   | 1    | 1/32 |
| No. of total organisms           | 23    | 232  | 254  | 200    | 76   | 253  |
| No. of total the other organisms | —     | —    | —    | —      | —    | —    |
| <b>ZOOPLANKTON</b>               |       |      |      |        |      |      |
| Noctiluca sp                     |       | 1    |      | 8      | 3    |      |
| Fish egg                         |       |      |      |        |      | 5    |
| Pelagic egg                      |       |      | 2    |        |      |      |
| Hyperia galba                    |       |      |      | 2      |      | 1    |
| Themisto gracilipes              |       |      |      | 11     |      | 5    |
| Parathemisto sp                  | 1     |      |      |        |      |      |
| Amphipoda larva                  |       |      |      | 1      | 1    |      |
| Euphausia larva                  |       |      | 30   |        |      | 2    |
| Euphausia sp                     | 1     | 1    |      | 1      |      |      |
| Leptochela sydniensis            |       |      |      | 3      |      | 1    |
| Pandalid sp                      |       |      |      | 1      |      | 1    |
| Decapoda sp                      |       |      |      |        |      | 1    |
| Lucifer raynaudii                |       |      | 1    |        |      | 4    |
| Plagusia dentipes                |       |      |      | 1      |      |      |
| Muggiaea sp                      |       |      |      | 4      |      | 1    |
| Brachyura larva                  |       |      |      | 5      | 1    |      |
| Squilla sp                       |       |      |      | 1      |      |      |
| Balanus larva                    |       |      |      | 4      |      |      |
| Sagitta bedoti                   |       |      |      | 7      |      | 3    |
| Sagitta larva                    |       |      |      | 37     | 1    | 28   |

| May  |      |      | June |      |      |
|------|------|------|------|------|------|
| 01   | 03   | 05   | 01   | 03   | 05   |
| 4    | 4    | 1    | 13   | 13   | 14   |
| 1110 | 0830 | 1805 | 0115 | 0450 | 1350 |
| 50   | 50   | 50   | 50   | 50   | 50   |
| 1.5  | 1.5  | 3.0  | 少    | 少    | 0.1  |
| 45.3 | 21.3 | 43.7 | 13.5 | 26.8 | 74.9 |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |
| —    | —    | —    | —    | —    | —    |



# G. 203선 부유생물 조사표

Plankton Data, Line 203, 1965

| Month                            | March |      |      | April |      | August |      |
|----------------------------------|-------|------|------|-------|------|--------|------|
| Station                          | 01    | 02   | 03   | 01    | 03   | 01     | 03   |
| Date                             | 25    | 25   | 22   | 30    | 30   | 13     | 13   |
| Time                             | 0250  | 0120 | 1715 | 1050  | 1420 | 1705   | 2100 |
| Collected depth(m)               | 50    | 50   | 50   | 50    | 50   | 50     | 50   |
| Volume(cc)                       | 0.1   | 0.2  | 0.03 | 4.0   | 3.0  | 1.0    | 5.0  |
| Biomass(mg/m <sup>3</sup> )      | 4.2   | 稀    | 少    | 93.5  | 30.4 | 46.5   | 59.3 |
| Rate of subsample                | 1/4   | 1    | 1    | 1/16  | 1/8  | 1/16   | 1/32 |
| No. of total organisms           | 262   | 103  | 3    | 171   | 59   | 326    | 134  |
| No. of total the other organisms |       |      |      |       |      |        |      |

## ZOOPLANKTON

|                             |     |    |   |     |    |     |    |
|-----------------------------|-----|----|---|-----|----|-----|----|
| Calanus helgolandicus       | 2   |    |   | 2   |    | 4   | 1  |
| Calanus larva               | 5   | 1  |   | 2   |    |     |    |
| Paracalanus parvus          | 187 | 60 | 2 | 120 | 44 | 207 | 26 |
| Clausocalanus arcuicornis   |     |    |   |     |    |     | 2  |
| Acrocalanus longicornis     |     |    |   |     |    | 9   |    |
| Ctenocalanus vanus          |     | 1  |   |     |    | 17  | 3  |
| Paraechaeta elongata        |     |    |   | 1   |    |     |    |
| Euchaeta longicornis        |     |    |   |     |    |     |    |
| Euchaeta plana              |     | 2  |   |     |    |     |    |
| Euchaeta larva              | 7   | 7  |   |     |    | 4   |    |
| Euchaeta sp                 |     |    |   | 1   |    |     |    |
| Temora stylifera            |     |    |   |     | 2  |     |    |
| Candacia bipinnata          |     | 3  |   |     |    |     |    |
| Acartia clausi              |     |    |   |     |    |     |    |
| Oithona plumifera           | 11  | 1  |   | 2   |    | 23  | 77 |
| Oithona nana                | 9   |    |   | 2   |    | 5   | 3  |
| Oithona larva               | 7   | 4  |   | 5   |    | 3   | 2  |
| Oithona sp                  |     |    |   | 2   | 1  |     |    |
| O-caea venusta              | 7   | 2  |   |     |    |     |    |
| O-caea ccnifera             |     |    |   | 1   |    |     |    |
| O-caea sp                   |     |    |   | 1   |    |     |    |
| Corycaeus affinis           | 3   |    |   |     |    |     |    |
| Corycaeus lautus            |     | 1  |   |     | 1  | 4   |    |
| Corycaeus larva             |     |    |   |     |    |     |    |
| Sapphiria stellata          |     |    | 1 |     |    | 1   |    |
| Copepoda larva              |     | 3  |   |     |    |     | 1  |
| Copepoda sp                 |     |    |   | 2   |    | 1   |    |
| Oikopleura sp               |     | 6  |   | 2   |    | 6   | 5  |
| Oikopleura larva            |     |    |   | 1   |    |     |    |
| Salpa sp                    | 1   |    |   |     |    |     |    |
| Evadne tergestina           |     |    |   |     | 2  | 5   | 1  |
| Noctiluca scintillans       |     |    |   |     |    |     |    |
| Conchoecia sp               | 3   | 1  |   |     | 2  |     |    |
| Fish larva                  |     |    |   |     |    | 1   |    |
| Fish egg                    |     |    |   |     |    | 29  |    |
| Palanic egg                 | 8   | 1  |   | 18  | 4  | 2   | 1  |
| Brachyura larva             | 1   | 1  |   |     |    |     |    |
| Shell larva                 |     | 1  |   |     |    |     |    |
| Balanus larva               |     |    |   |     |    |     |    |
| Parathemisto sp             | 1   | 1  |   |     |    |     |    |
| Themisto gracilipes         |     |    |   | 5   |    |     |    |
| Amphipoda larva             |     |    |   | 2   |    |     | 1  |
| Euphausia pacifica larva    |     |    |   |     |    |     |    |
| Euphausia larva             | 3   | 3  |   | 1   |    | 1   |    |
| Euphausia sp                |     | 4  |   |     |    |     |    |
| Thalassinid larva           |     |    |   |     |    |     |    |
| Chlorotocella leptorhynchus |     |    |   |     |    |     | 1  |
| Lucifer raynaudii           |     |    |   |     |    |     | 1  |
| Leptochela sydniensis       |     |    |   | 2   |    |     | 1  |
| Sagitta bedoti              |     |    |   |     |    |     | 3  |
| Sagitta larva               |     |    |   |     |    | 15  | 3  |

| June |      |      | October |      |      |
|------|------|------|---------|------|------|
| 01   | 02   | 03   | 01      | 02   | 03   |
| 16   | 16   | 16   | 13      | 13   | 11   |
| 1650 | 1440 | 1225 | 1240    | 1110 | 1230 |
| 50   | 50   | 50   | 50      | 50   | 50   |
| 少    | 少    | 2.8  | 少       | 少    | 3.0  |
| 10.3 | 3.7  | 2.0  | 17.0    | 68.3 | 70   |
| —    | —    | —    | —       | —    | —    |
| —    | —    | —    | —       | —    | —    |
| —    | —    | —    | —       | —    | —    |
| —    | —    | —    | —       | —    | —    |



서 해 부 유 생 물 조 사 성 적

PLANKTON DATA  
WESTERN WATERS

1 9 6 5



# A. 314선 부유생물 조사표

## Plankton Data, Line 314

| Month                            | March |       |      |      | May  |      |      |
|----------------------------------|-------|-------|------|------|------|------|------|
| Station                          | 02    | 04    | 06   | 08   | 02   | 04   | 06   |
| Date                             | 21    | 21    | 22   | 22   | 1    | 1    | 1    |
| Time                             | 1725  | 2235  | 0140 | 0550 | 1020 | 0620 | 0220 |
| Collected depth(m)               | 50    | 50    | 50   | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 2.5   | 20.0  | 10.0 | 10.0 | 5.0  | 10.0 | 8.0  |
| Biomass(mg/m <sup>3</sup> )      | 21.7  | 277.2 | 176  | 248  | 53.8 | 88.9 | 77.3 |
| Rate of subsample                | 1/4   | 1/8   | 1/16 | 1/8  | —    | —    | —    |
| No. of total organisms           | 541   | 441   | 154  | 252  | —    | —    | —    |
| No. of total the other organisms | —     | —     | —    | —    | —    | —    | —    |

### ZOOPLANKTON

|                            |     |     |    |     |
|----------------------------|-----|-----|----|-----|
| Calanus helgolandicus      | 1   | 1   | 1  | 9   |
| Calanus helgolandicus juv  | 4   |     |    | 1   |
| Calanus larva              | 4   | 1   | 1  |     |
| Eucalanus subcrassus       | 8   |     |    |     |
| Eucalanus mucronatus       | 1   |     |    |     |
| Eucalanus larva            |     | 1   |    |     |
| Rhincalanus nasutus        | 3   | 1   | 1  | 2   |
| Peracalanus parvus         | 368 | 178 | 57 | 115 |
| Paracalanus aculeatus      | 2   | 2   | 1  | 1   |
| Clausocalanus pergens      | 2   | 5   | 5  |     |
| Ctenocalanus vanus         | 7   | 1   | 3  | 1   |
| Euchaeta plana             | 4   | 2   | 4  | 3   |
| Pareuchaeta elongata       | 2   | 1   |    | 5   |
| Euchaeta larva             | 4   |     | 6  | 4   |
| Euchaeta sp                |     | 3   |    | 2   |
| Scolecithricella abyssalis |     | 1   | 4  | 1   |
| Scolecithricella sp        |     |     |    | 1   |
| Candacia bipinnata         |     |     | 1  |     |
| Candacia larva             |     |     | 1  | 2   |
| Oithona plumifera          | 33  |     | 13 | 7   |
| Oithona nana               | 9   | 1   | 1  |     |
| Oithona larva              | 9   |     | 4  | 13  |
| Oncaea venusta             | 20  | 33  | 18 | 11  |
| Oncaea media               | 11  |     |    |     |
| Copepoda larva             | 1   | 178 | 3  | 3   |
| Parathemisto sp            | 1   | 2   | 1  | 3   |
| Amphipoda sp               |     | 1   |    |     |
| Euphausia larva            | 17  | 9   | 3  | 3   |
| Euphausia sp               |     | 1   | 10 | 14  |
| Lucifer raynaudii          |     |     |    | 1   |
| Siriella vincenti          |     |     |    | 2   |
| Oikopleura sp              | 2   | 1   | 1  | 1   |
| Polychaeta larva           | 1   |     | 1  | 1   |
| Fritillaria sp             |     |     |    | 2   |
| Sheli larva                |     |     |    | 4   |
| Conchoecia elegans         | 14  | 8   |    | 9   |
| Salpa fusiformis           |     | 3   |    |     |
| Muggiaea atlantica         | 9   | 5   |    |     |
| Muggiaea sp                |     |     |    | 5   |
| Fish egg                   |     |     |    | 4   |
| Pelagic egg                | 2   | 2   | 14 | 22  |
| Sagitta sp                 | 2   |     |    |     |



# B. 313선 부유생물 조사표

## Plankton Data, Line 313

| Month                            | March |      | August |       |      |      | April |      |      | June |      |      |
|----------------------------------|-------|------|--------|-------|------|------|-------|------|------|------|------|------|
| Station                          | 02    | 04   | 02     | 04    | 06   | 08   | 02    | 03   | 04   | 02   | 03   | 04   |
| Date                             | 22    | 22   | 14     | 14    | 14   | 14   | 30    | 30   | 30   | 15   | 15   | 15   |
| Time                             | 1505  | 1200 | 0025   | 0455  | 0814 | 1132 | 1620  | 1750 | 1910 | 1250 | 1135 | 1000 |
| Collected depth(m)               | 50    | 50   | 50     | 50    | 50   | 50   | 50    | 50   | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 1.0   | 1.6  | 1.0    | 7.0   | 3.0  | 4.0  | 7.0   | 5.0  | 3.0  | 2.2  | 3.0  | 少    |
| Biomass(mg/m <sup>3</sup> )      | 16.2  | 18   | 11     | 176.2 | 40.4 | 75.2 | 57.8  | 30.2 | 43   | 29.5 | 55.2 | 16   |
| Rate of subsample                | 1/4   | 1/4  | 1/8    | 1/32  | 1/16 | 1/8  | —     | —    | —    | —    | —    | —    |
| No. of total organisms           | 627   | 489  | 229    | 516   | 344  | 309  | —     | —    | —    | —    | —    | —    |
| No. of total the other organisms | —     | —    | —      | —     | —    | —    | —     | —    | —    | —    | —    | —    |

### ZOOPLANKTON

|                            |     |     |    |     |     |    |  |  |
|----------------------------|-----|-----|----|-----|-----|----|--|--|
| Calanus helgolandicus      | 9   |     | 1  | 2   | 1   | 21 |  |  |
| Calanus tenuicornis        | 1   |     |    |     |     |    |  |  |
| Eucalanus larva            |     | 1   |    |     |     |    |  |  |
| Paracalanus parvus         | 397 | 351 | 34 | 97  | 61  | 50 |  |  |
| Paracalanus aculeatus      | 7   | 2   |    |     |     |    |  |  |
| Paracalanus larva          | 1   |     |    |     |     |    |  |  |
| Ctenocalanus vanus         | 8   | 6   | 4  | 11  | 6   | 5  |  |  |
| Pareuchaeta elongata       | 1   | 2   |    |     |     |    |  |  |
| Euchaeta Plana             |     | 4   |    |     |     |    |  |  |
| Euchaeta flava             |     |     |    |     |     | 1  |  |  |
| Euchaeta larva             | 35  | 10  | 2  |     | 2   | 3  |  |  |
| Scolecithricella abyssalis | 2   |     |    |     |     |    |  |  |
| Scolecithricella sp        |     | 1   |    |     |     |    |  |  |
| Lucicutia flavicornis      | 1   |     |    |     |     |    |  |  |
| Candacia larva             | 1   |     |    |     |     |    |  |  |
| Acartia clausi             |     |     | 64 | 130 | 117 | 52 |  |  |
| Acartia pacifica           |     |     | 2  |     |     |    |  |  |
| Acartia larva              |     |     | 16 | 8   |     | 3  |  |  |
| Oithona plumifera          | 30  | 20  | 86 | 59  | 74  | 38 |  |  |
| Oithona similis            |     |     | 8  |     |     |    |  |  |
| Oithona robusta            |     |     |    |     | 2   | 5  |  |  |
| Oithona larva              | 2   | 22  | 8  |     | 6   | 0  |  |  |
| Setella gracilis           | 1   |     |    |     |     |    |  |  |
| Oncaea venusta             | 23  | 12  |    |     |     |    |  |  |
| Corycaeus affinis          | 1   | 1   |    | 1   | 6   | 4  |  |  |
| Copepoda larva             | 1   |     |    |     |     | 1  |  |  |
| Copepoda sp                | 2   | 2   |    |     |     |    |  |  |
| Evadne tergestina          |     |     |    |     | 1   | 4  |  |  |
| Oikopleura sp              | 15  | 7   |    |     | 5   | 5  |  |  |
| Conchoecia elegans         |     | 7   |    |     |     |    |  |  |
| Conchoecia sp              | 20  |     |    |     |     |    |  |  |
| Brachyura larva            |     | 1   |    |     |     |    |  |  |
| Shell larva                | 20  |     |    |     |     |    |  |  |
| Pelagic egg                | 18  | 3   |    |     |     |    |  |  |
| Muggiaea atlantica         | 23  | 16  |    |     |     |    |  |  |
| Muggiaea sp                | 2   | 12  |    |     |     |    |  |  |
| Hyperia galba              |     |     |    | 68  | 27  | 55 |  |  |
| Themisto gracilipes        |     |     |    | 3   | 6   | 5  |  |  |
| Euthemisto bispinosa       |     |     |    | 41  | 7   | 15 |  |  |
| Euthemisto sp              |     |     | 1  |     |     |    |  |  |
| Parathemisto obliqua       |     |     |    |     |     | 5  |  |  |
| Parathemisto sp            | 1   | 1   |    |     |     |    |  |  |
| Phacotropsis sp            |     |     |    |     | 1   | 2  |  |  |
| Euphausia pacifica larva   |     |     | 1  | 68  | 3   |    |  |  |
| Euphausia sp               | 2   | 8   | 1  |     |     |    |  |  |
| Leptochela sydnensis       | 3   |     |    | 2   |     |    |  |  |
| Siriella sp                |     |     |    | 1   |     |    |  |  |
| Lucifer raynaudii          |     |     | 1  |     | 0   | 9  |  |  |
| Sagitta bedoti             |     |     |    |     | 8   | 18 |  |  |
| Sagitta larva              |     |     |    | 2   |     |    |  |  |
| Sagitta sp                 | 2   |     |    |     |     |    |  |  |



[illegible]

## C. 312선 부유생물 조사표

## Plankton Data, Line 312

| Month                            | April |      |      |      | August |      |      |       |
|----------------------------------|-------|------|------|------|--------|------|------|-------|
| Station                          | 02    | 04   | 06   | 08   | 02     | 04   | 06   | 08    |
| Date                             | 8     | 8    | 8    | 9    | 15     | 15   | 15   | 14    |
| Time                             | 1520  | 1825 | 2200 | 0840 | 0830   | 0525 | 0155 | 1910  |
| Collected depth(m)               | 50    | 50   | 50   | 50   | 50     | 50   | 50   | 50    |
| Volume(cc)                       | 0.2   | 0.6  | 0.4  | 0.2  | 1      | 4    | 3    | 3.5   |
| Biomass(mg/m <sup>3</sup> )      | 2.9   | 14.2 | 18.9 | 4.2  | 27.2   | 53.1 | 60   | 121.6 |
| Rate of subsample                | 1     | 1/4  | 1    | 1/2  | 1/8    | 1/16 | 1/16 | 1/16  |
| No. of total organisms           | 218   | 822  | 188  | 344  | 711    | 429  | 246  | 639   |
| No. of total the other organisms | —     | —    | —    | —    | —      | —    | —    | —     |

## ZOOPLANKTON

|                            |     |     |     |    |     |     |     |     |
|----------------------------|-----|-----|-----|----|-----|-----|-----|-----|
| Calanus helgolandicus      | 7   | 1   | 28  | 3  | 2   | 8   | 5   | 4   |
| Calanus helgolandicus juv  |     |     | 4   | 16 |     |     | 4   | 1   |
| Calanus larva              | 5   |     | 5   | 32 | 2   |     |     | 1   |
| Paracalanus parvus         | 159 | 13  | 118 | 42 | 25  | 130 | 131 | 540 |
| Acrocalanus gibber         |     |     |     |    |     |     |     | 1   |
| Clausocalanus pergens      |     |     |     |    |     | 2   |     |     |
| Clausocalanus arcuicornis  |     |     |     |    |     |     | 2   |     |
| Ctenocalanus vanus         | 2   |     |     |    | 5   | 5   | 5   | 6   |
| Pareuchaeta elongata juv   |     |     |     |    |     | 1   |     |     |
| Euchaeta larva             |     |     |     |    | 1   | 5   | 2   | 2   |
| Scolecithricella abyssalis |     |     | 2   |    |     |     |     |     |
| Centropages abdominalis    |     | 1   |     | 2  |     |     |     |     |
| Centropages larva          | 1   |     |     | 3  |     |     |     |     |
| Acartia clausi             |     |     |     | 14 | 664 | 43  | 19  | 15  |
| Acartia clausi juv         |     |     |     |    |     | 2   |     |     |
| Oithona plumifera          | 2   | 2   |     | 3  |     | 9   | 10  | 5   |
| Oithona robusta            |     |     |     |    |     |     | 1   |     |
| Oithona nana               |     |     |     |    |     | 7   | 7   | 1   |
| Oithona larva              | 1   |     |     | 2  | 5   |     |     |     |
| Corycaeus affinis          | 1   | 6   | 11  | 40 |     | 28  | 3   | 2   |
| Corycaeus trukicus         |     |     |     |    |     |     | 9   | 1   |
| Corycaeus catus            |     |     |     |    |     |     | 5   |     |
| Copepoda larva             | 5   | 1   | 5   | 57 |     |     | 2   |     |
| Copepoda sp                |     |     | 2   | 1  |     |     |     |     |
| Oikopleura sp              |     |     |     | 30 |     |     |     | 1   |
| Ophiopluteus larva         |     |     | 2   |    |     |     |     |     |
| Evadne tergestina          |     |     |     |    | 1   | 1   |     |     |
| Noctiluca scintillans      | 16  | 798 |     |    |     |     |     |     |
| Conchoecia elegans         | 2   |     |     | 1  |     |     |     |     |
| Muggiaea atlantica         | 1   |     |     |    |     |     |     |     |
| Muggiaea sp                | 11  |     |     | 1  |     |     |     |     |
| Fish egg                   |     |     |     | 89 |     |     |     |     |
| Pelagic egg                | 3   |     |     |    |     | 84  |     | 4   |
| Hyperia galba              |     |     |     |    | 1   |     |     |     |
| Hyperia sp                 |     |     |     |    |     | 8   |     |     |
| Themisto gracilipes        |     |     |     |    |     | 50  | 10  | 17  |
| Euthemisto bispinosa       |     |     |     |    |     | 1   | 3   | 1   |
| Parathemisto obliqua       |     |     |     | 1  |     |     |     |     |
| Parathemisto sp            | 1   |     |     |    | 3   |     | 2   | 1   |
| Amphipoda larva            |     |     |     |    | 1   |     |     |     |
| Amphipoda sp               |     |     |     |    |     | 11  | 19  |     |
| Euphausia pacifica larva   |     |     |     | 5  |     |     |     |     |
| Euphausia larva            |     |     |     |    |     | 1   |     |     |
| Euphausia sp               | 1   |     | 6   |    |     | 1   |     |     |
| Pandalid sp                |     |     |     |    |     |     |     |     |
| Decapoda sp                |     |     |     |    |     |     | 3   |     |
| Liriope tetraphylla        |     |     |     |    |     | 4   |     |     |
| Pteropoda sp               |     |     |     |    |     | 4   | 2   | 7   |
| Sagitta bedoti             |     |     |     |    |     |     |     | 1   |
| Sagitta serratodentata     |     |     |     |    |     | 15  |     | 14  |
| Sagitta crassa             |     |     | 5   | 2  |     |     |     | 4   |
| Sagitta larva              |     |     |     |    |     |     |     |     |

| Month                            | June |      |      | October |      |      |
|----------------------------------|------|------|------|---------|------|------|
| Station                          | 02   | 04   | 06   | 02      | 04   | 06   |
| Date                             | 4    | 4    | 4    | 16      | 16   | 16   |
| Time                             | 0840 | 1230 | 1010 | 1430    | 1810 | 2150 |
| Collected depth(m)               | 50   | 50   | 50   | 60      | 60   | 50   |
| Volume(cc)                       | 少    | 2.0  | 1.2  | 少       | 3    | 2    |
| Biomass(mg/m)                    | 稀    | 48.5 | 40.8 | 12.3    | 17.0 | 35.5 |
| Rate of subsample                | —    | —    | —    | —       | —    | —    |
| No. of total organisms           | —    | —    | —    | —       | —    | —    |
| No. of total the other organisms | —    | —    | —    | —       | —    | —    |

## D. 311선 부유생물 조사표

## Plankton Data, Line 311

| Month                            | April |      |      | August |      |      |
|----------------------------------|-------|------|------|--------|------|------|
| Station                          | 04    | 06   | 08   | 04     | 06   | 08   |
| Date                             | 9     | 11   | 12   | 17     | 19   | 19   |
| Time                             | 1640  | 0810 | 0930 | 1220   | 1035 | 1410 |
| Collected depth(m)               | 30    | 80   | 50   | 50     | 50   | 50   |
| Volume(cc)                       | 2.5   | 1.0  | 0.1  | 3.0    | 1.1  | 0.9  |
| Biomass(mg/m <sup>3</sup> )      | 131.5 | 16.6 | 2.8  | 39     | 29.2 | 14.8 |
| Rate of subsample                | 1/16  | 1/2  | 1    | 1/8    | 1/8  | 1/8  |
| No. of total organisms           | 1664  | 227  | 259  | 669    | 174  | 232  |
| No. of total the other organisms | —     | —    | —    | —      | —    | —    |

## ZOOPLANKTON

|                             |      |     |    |     |    |    |
|-----------------------------|------|-----|----|-----|----|----|
| Calanus helgolandicus       | 7    | 16  |    | 1   | 6  |    |
| Calanus helgolandicus juv   | 3    | 3   | 6  |     | 1  | 6  |
| Calanus sp                  |      |     | 1  |     |    |    |
| Paracalanus parvus          | 33   | 72  | 56 | 33  | 72 | 55 |
| Paracalanus larva           | 2    | 36  | 21 |     | 1  |    |
| Cterocalanus varus          |      |     |    |     |    |    |
| Euchaeta larva              |      |     |    | 3   | 2  | 6  |
| Centropages abdominalis     |      | 39  | 38 | 1   |    |    |
| Centropages larva           |      | 9   | 12 |     |    |    |
| Labidocera euchaeta         |      |     |    | 1   |    |    |
| Acartia clausi              | 1    | 1   | 5  | 494 | 25 | 67 |
| Acartia larva               |      |     | 1  |     |    |    |
| Oithona plumifera           |      | 4   | 4  | 1   | 15 | 27 |
| Oithona nana                |      |     | 1  | 6   | 14 | 8  |
| Oithona setigera            |      |     |    |     | 4  | 1  |
| Oithona robusta             |      |     |    |     | 1  |    |
| Oithona larva               |      |     | 3  |     | 6  | 1  |
| Oncaea larva                |      |     |    |     | 1  |    |
| Corycaeus affinis           | 42   | 208 | 47 | 58  | 13 | 4  |
| Corycaeus catus             |      |     |    |     |    | 3  |
| Corycaeus latus             |      |     |    |     |    | 1  |
| Copepoda larva              | 3    | 7   | 2  |     |    |    |
| Copepoda sp                 |      |     | 1  |     |    |    |
| Evadne tergestina           |      |     |    |     |    | 2  |
| Fish larva                  |      |     |    |     |    | 1  |
| Fish egg                    |      |     |    |     |    | 2  |
| Polychaeta larva            | 1    | 1   | 4  |     |    |    |
| Ophiopluteus larva          | 8    | 6   | 49 |     |    |    |
| Noctiluca scintillans       | 1561 |     |    |     |    |    |
| Hyperia galba               |      |     |    | 3   | 1  | 14 |
| Hyperia sp                  |      |     |    |     |    | 5  |
| Euthemisto bispinosa        |      |     |    |     | 1  |    |
| Parathemisto oblivia        |      |     |    |     | 1  | 14 |
| Parathemisto sp             | 2    | 3   | 7  |     |    |    |
| Amphipoda sp                |      |     |    |     | 1  |    |
| Euphausia larva             |      |     |    | 2   |    |    |
| Leptochela sydnensis        |      |     |    | 1   |    |    |
| Euphausia sp                | 1    |     | 1  | 1   |    |    |
| Pandalid sp                 |      |     |    | 1   | 1  | 1  |
| Gastrosaccus philippinensis |      |     |    | 1   |    |    |
| Lucifer raynaudii           |      |     |    | 1   |    |    |
| Plagusia dentipes           |      |     |    |     | 2  |    |
| Brachyura larva             |      |     |    | 5   |    |    |
| Sagitta bedoti              |      |     |    | 1   |    | 5  |
| Sagitta crassa              |      |     |    | 34  |    |    |
| Sagitta larva               |      |     |    | 21  | 5  | 9  |
| Sagitta sp                  |      | 2   | 1  |     |    |    |

[illegible]

# E. 310선 부유생물 조사표 Plankton Data, Line 310

| Month                            | April |      |      | June |      |      | August |       |      |      | Dec. |
|----------------------------------|-------|------|------|------|------|------|--------|-------|------|------|------|
| Station                          | 03    | 05   | 07   | 03   | 05   | 07   | 03     | 05    | 07   | 09   | 05   |
| Date                             | 12    | 12   | 12   | 6    | 5    | 5    | 20     | 20    | 19   | 19   | 22   |
| Time                             | 2350  | 2010 | 1620 | 0050 | 2110 | 1730 | 0445   | 0130  | 2240 | 1935 | 1635 |
| Collected depth(m)               | 30    | 60   | 50   | 10   | 30   | 50   | 50     | 50    | 50   | 50   | 50   |
| Volume(cc)                       | 1.5   | 2.0  | 0.5  | 0.1  | 0.6  | 0.1  | 2.2    | 5.0   | 15.0 | 3.0  | 4.0  |
| Biomass(mg/m <sup>3</sup> )      | 18    | 37.5 | 8    | 27.4 | 18.5 | 3    | 108.4  | 117.4 | 309  | 93.1 | 47.2 |
| Rate of subsample                | 1/2   | 1/2  | 1/2  | —    | —    | —    | 1/8    | 1/16  | 1/32 | 1/16 | —    |
| No. of total organisms           | 233   | 245  | 259  | —    | —    | —    | 362    | 418   | 520  | 632  | —    |
| No. of total the other organisms | —     | —    | —    | —    | —    | —    | —      | —     | —    | —    | —    |

## ZOOPLANKTON

|                             |    |    |     |  |  |  |     |     |     |     |  |
|-----------------------------|----|----|-----|--|--|--|-----|-----|-----|-----|--|
| Calanus helgolandicus       |    | 10 |     |  |  |  | 31  | 31  | 25  |     |  |
| Calanus helgolandicus juv   | 14 | 14 | 5   |  |  |  | 4   | 1   | 4   | 110 |  |
| Calanus larva               | 7  | 4  | 1   |  |  |  |     |     |     |     |  |
| Paracalanus parvus          | 5  | 4  | 6   |  |  |  |     |     |     |     |  |
| Ctenocalanus vanus          |    |    |     |  |  |  | 130 | 104 | 32  | 25  |  |
|                             |    |    |     |  |  |  |     | 1   | 2   | 1   |  |
| Pareuchaeta elongata juv    |    |    |     |  |  |  |     |     |     |     |  |
| Euchaeta larva              |    |    |     |  |  |  | 1   |     |     |     |  |
| Centropages abdominalis     | 43 | 14 |     |  |  |  | 1   |     |     |     |  |
| Centropages abdominalis juv | 30 | 37 | 17  |  |  |  | 1   |     | 1   | 1   |  |
| Labidocera bipinnata        |    |    |     |  |  |  | 2   |     |     |     |  |
| Labidocera euchaeta         |    |    |     |  |  |  |     |     |     |     |  |
| Labidocera larva            |    |    |     |  |  |  |     |     |     | 1   |  |
| Acartia clausi              | 18 | 6  | 4   |  |  |  | 2   |     |     |     |  |
| Acartia larva               |    |    |     |  |  |  | 17  | 106 | 143 | 83  |  |
| Oithona plumifera           | 4  |    | 2   |  |  |  | 1   |     |     |     |  |
|                             |    |    |     |  |  |  | 5   | 26  | 64  |     |  |
| Oithona nana                |    |    |     |  |  |  |     |     |     |     |  |
| Oithona robusta             |    |    |     |  |  |  | 1   | 26  | 21  | 36  |  |
| Corycaeus affinis           | 59 | 83 | 137 |  |  |  |     | 9   | 10  | 16  |  |
| Copepoda larva              | 14 | 7  | 6   |  |  |  |     |     |     |     |  |
|                             |    |    |     |  |  |  | 3   | 3   |     | 1   |  |
| Oikopleura sp               | 5  | 1  | 5   |  |  |  |     |     |     |     |  |
| Ophiopluteus larva          | 13 | 47 | 41  |  |  |  | 5   |     |     | 1   |  |
| Penilia schmackeri          |    |    |     |  |  |  |     |     |     |     |  |
| Evadne tergestina           |    |    |     |  |  |  |     |     | 1   | 8   |  |
| Noctiluca scintillans       |    |    | 1   |  |  |  | 52  | 20  | 38  | 36  |  |
|                             |    |    |     |  |  |  | 2   |     |     |     |  |
| Fish larva                  | 1  |    |     |  |  |  |     |     |     |     |  |
| Polychaeta larva            | 3  |    |     |  |  |  | 2   | 4   |     |     |  |
| Fish egg                    | 1  | 10 | 16  |  |  |  |     |     |     |     |  |
| Brachyura larva             |    |    | 1   |  |  |  | 4   |     | 2   | 1   |  |
| Hyperia galba               |    |    |     |  |  |  |     |     |     |     |  |
|                             |    |    |     |  |  |  | 8   | 17  | 21  | 276 |  |
| Hyperia sp                  |    |    |     |  |  |  | 2   |     |     |     |  |
| Themisto gracilipes         |    |    |     |  |  |  | 1   | 1   |     | 1   |  |
| Euthemisto bispinosa        |    |    |     |  |  |  | 3   | 10  | 5   | 7   |  |
| Parathemisto obliqua        |    |    |     |  |  |  | 1   |     | 1   |     |  |
| Parathemisto sp             |    | 1  | 4   |  |  |  |     |     |     |     |  |
| Amphipoda larva             |    |    |     |  |  |  |     |     | 4   |     |  |
| Amphipoda sp                |    |    |     |  |  |  | 1   |     | 3   |     |  |
| Euphausia pacifica          |    |    |     |  |  |  |     | 23  |     |     |  |
| Euphausia pacifica larva    |    |    |     |  |  |  |     |     | 86  | 4   |  |
| Euphausia larva             | 10 | 3  | 10  |  |  |  | 5   |     |     |     |  |
| Leptochela sydnensis        |    |    |     |  |  |  | 1   |     |     |     |  |
| Decapoda sp                 |    |    |     |  |  |  |     |     | 1   |     |  |
| Liriope tetraphylla         |    |    |     |  |  |  | 1   |     |     |     |  |
| Sagitta bedoti              |    |    |     |  |  |  | 5   | 3   | 4   |     |  |
| Sagitta crassa              |    |    |     |  |  |  | 26  | 16  | 26  |     |  |
| Sagitta larva               |    |    |     |  |  |  | 20  | 15  | 23  |     |  |
| Sagitta sp                  | 7  | 4  | 3   |  |  |  |     |     |     |     |  |

## F. 309선 부유생물 조사표

## Plankton Data, Line 309

| Month                            | April |      |      | August |      |      |      |      |
|----------------------------------|-------|------|------|--------|------|------|------|------|
| Station                          | 01    | 03   | 05   | 01     | 03   | 05   | 07   | 09   |
| Date                             | 13    | 13   | 13   | 25     | 25   | 25   | 26   | 26   |
| Time                             | 0540  | 0920 | 1300 | 1810   | 2015 | 2400 | 0210 | 0610 |
| Collected depth(m)               | 25    | 40   | 50   | 24     | 48   | 50   | 50   | 50   |
| Volume(cc)                       | 1.5   | 0.7  | 0.3  | 0.3    | 2.8  | 3.0  | 2.0  | 3.0  |
| Biomass(mg/m <sup>3</sup> )      | 83.7  | 17.5 | 4.3  | 11.4   | 73.6 | 70   | 46.8 | 29   |
| Rate of suasample                | 1/4   | 1/8  | 1/2  | 1/8    | 1/8  | 1/16 | 1/16 | 1/16 |
| No. of total organisms           | 267   | 213  | 184  | 229    | 600  | 408  | 201  | 283  |
| No. of total the other organisms | —     | —    | —    | —      | —    | —    | —    | —    |

## ZOOPLANKTON

|                             |     |    |    |     |     |     |    |    |
|-----------------------------|-----|----|----|-----|-----|-----|----|----|
| Calanus helgolandicus       | 15  | 8  |    |     |     | 25  | 17 |    |
| Calanus helgolandicus juv   |     | 4  | 2  |     |     | 8   | 11 | 1  |
| Calanus larva               | 10  | 1  | 6  | 6   |     |     |    |    |
| Paracalanus parvus          | 29  | 17 | 5  | 13  | 158 | 109 | 23 | 23 |
| Ctenocalanus vanus          |     |    |    |     |     | 2   |    | 1  |
| Euchaeta larva              |     |    |    |     |     |     | 1  |    |
| Centropages abdominalis     | 7   | 45 | 90 |     |     |     |    |    |
| Centropages abdominalis juv | 14  |    |    |     |     |     |    |    |
| Centropages larva           |     | 20 | 41 | 3   |     |     |    |    |
| Labidocera larva            |     |    |    | 1   | 4   |     |    |    |
| Acartia clausi              | 10  | 5  | 14 |     | 4   | 63  | 26 | 65 |
| Acartia larva               | 1   |    | 1  | 2   |     |     |    |    |
| Tortanus discaudatus        |     |    |    | 2   |     |     |    |    |
| Oithona plumifera           |     |    |    |     |     | 45  | 4  | 14 |
| Oithona nana                |     |    |    |     | 10  | 5   | 10 | 47 |
| Oithona similis             |     |    |    |     |     |     |    | 4  |
| Oithona robusta             |     |    |    |     |     |     |    | 10 |
| Oithona robusta juv         | 3   | 1  |    |     |     |     |    |    |
| Oithona larva               |     | 1  |    |     |     |     |    |    |
| Corycaeus affinis           | 11  | 9  | 14 | 16  | 19  | 6   | 1  | 1  |
| Copepoda larva              | 3   | 5  | 1  | 4   | 1   |     | 2  | 3  |
| Polychaeta larva            | 5   | 3  |    | 1   |     |     |    |    |
| Ophiopluteus larva          | 5   | 1  | 2  |     | 18  |     |    |    |
| Oikopleura sp               | 3   | 5  | 1  | 2   | 12  | 2   | 3  | 1  |
| Penilia schmackeri          |     |    |    |     |     |     | 2  | 10 |
| Evadne tergestina           |     |    |    | 136 | 249 | 83  | 20 | 34 |
| Noctiluca scintillans       | 109 | 60 | 3  | 17  | 5   |     |    |    |
| Fish larva                  |     |    |    |     | 2   |     |    |    |
| Fish egg                    | 31  |    | 1  |     | 2   | 1   |    |    |
| Pelagic egg                 |     | 23 |    | 1   | 3   |     |    |    |
| Hyperia galba               |     |    |    |     |     |     | 21 | 35 |
| Hyperia schijogenios        |     |    |    |     |     | 2   |    |    |
| Themisto gracilipes         |     |    |    | 4   |     | 2   |    |    |
| Euthemisto bispinosa        |     |    |    | 1   |     | 2   |    |    |
| Parathemisto obliqua        |     |    |    |     |     | 1   |    |    |
| Amphipoda larva             | 2   |    |    |     | 1   |     |    |    |
| Euphausia larva             |     |    | 2  | 2   | 2   | 2   |    | 1  |
| Leptochela sydnensis        |     |    |    | 5   |     |     |    |    |
| Pandalid sp                 |     |    |    | 2   |     |     |    |    |
| Panaeus larva               |     |    |    |     | 4   |     |    |    |
| Plagusia dentipes           |     |    |    | 2   | 2   |     |    |    |
| Muggiaea sp                 |     |    |    |     | 5   |     |    |    |
| Brachyura larva             |     |    |    | 1   |     | 2   |    |    |
| Pyrosoma sp                 |     |    |    |     |     | 2   |    |    |
| Liriope tetraphylla         |     |    |    |     |     | 2   |    |    |
| Pteropoda sp                |     |    |    |     | 37  | 1   |    |    |
| Sagitta pulchra             |     |    |    |     |     | 1   |    |    |
| Sagitta bedoti              |     |    |    |     | 5   | 3   | 1  |    |
| Sagitta crassa              |     |    |    |     | 29  | 20  | 41 | 13 |
| Sagitta larva               |     |    |    | 6   | 30  | 17  | 1  | 25 |
| Sagitta sp                  | 3   | 5  | 1  |     |     |     |    |    |

| June |      |      |      | October |      |      |      |
|------|------|------|------|---------|------|------|------|
| 01   | 03   | 05   | 09   | 01      | 03   | 05   | 07   |
| 8    | 8    | 8    | 8    | 19      | 19   | 19   | 19   |
| 0530 | 0910 | 1215 | 1630 | 0610    | 0940 | 1300 | 1630 |
| 15   | 30   | 50   | 50   | 20      | 30   | 50   | 30   |
| 0.5  | 1.0  | 0.5  | 0.5  | 0.5     | 1.0  | 0.5  | 少    |
| 60.5 | 57.0 | 7.5  | 10.7 | 38.5    | 41   | 68   | 20.9 |
| —    | —    | —    | —    | —       | —    | —    | —    |
| —    | —    | —    | —    | —       | —    | —    | —    |
| —    | —    | —    | —    | —       | —    | —    | —    |



## C. 308선 부유생물 조사표

Plankton Data, Line 308

| Month                            | April |      |      | August |      |      |      |      |
|----------------------------------|-------|------|------|--------|------|------|------|------|
| Station                          | 01    | 03   | 05   | 01     | 03   | 05   | 07   | 09   |
| Date                             | 14    | 14   | 13   | 26     | 26   | 26   | 26   | 26   |
| Time                             | 0500  | 0120 | 2145 | 2125   | 1820 | 1535 | 1230 | 0925 |
| Collected depth(m)               | 20    | 50   | 50   | 50     | 50   | 50   | 50   | 50   |
| Volume(cc)                       | 1.7   | 2.5  | 1.3  | 2.0    | 4.0  | 1.5  | 1.2  | 2.0  |
| Biomass(mg/m <sup>3</sup> )      | 75.4  | 38   | 17   | 46.2   | 79   | 39.4 | 20.3 | 6    |
| Rate of subsample                | 1/8   | 1/8  | 1/8  | 1/16   | 1/16 | 1/16 | 1/8  | 1/8  |
| No. of total organisms           | 204   | 425  | 235  | 391    | 488  | 456  | 332  | 314  |
| No. of total the other organisms | —     | —    | —    | —      | —    | —    | —    | —    |

## ZOOPLANKTON

|                           |    |     |    |     |    |     |    |    |
|---------------------------|----|-----|----|-----|----|-----|----|----|
| Calanus helgolandicus     | 2  | 6   | 4  | 1   | 13 | 12  |    |    |
| Calanus helgolandicus juv |    |     |    | 2   | 1  |     |    | 5  |
| Calanus larva             | 2  | 12  | 14 |     | 6  | 4   | 1  |    |
| Paracalanus parvus        | 11 | 18  | 24 | 161 | 91 | 115 | 53 | 38 |
| Centropages abdominalis   | 88 | 25  | 27 |     |    |     |    |    |
| Centropages larva         | 51 | 15  | 18 |     |    | 1   |    |    |
| Calanopia thompsoni       |    |     |    | 9   |    |     |    |    |
| Labidocera euchaeta juv   |    |     |    | 1   |    |     |    |    |
| Labidocera larva          |    |     |    | 5   |    |     |    |    |
| Acartia clausi            | 11 | 6   | 11 | 3   | 6  | 35  | 43 | 80 |
| Acartia larva             |    | 3   |    |     | 4  |     | 2  |    |
| Tortanus forcipatus       |    |     |    | 4   |    |     |    |    |
| Tortanus discaudatus      |    |     |    | 2   |    |     |    |    |
| Tortanus larva            |    |     |    | 1   |    |     |    |    |
| Oithona plumifera         |    |     |    |     |    |     |    |    |
| Oithona nana              |    | 1   | 2  | 12  | 5  | 13  | 33 | 59 |
| Oithona similis           |    |     |    |     | 42 | 61  | 42 | 84 |
| Oithona robusta           |    |     |    |     | 3  |     | 1  |    |
| Oithona rigida            |    |     |    |     | 1  | 4   | 6  | 7  |
| Oithona larva             |    |     |    |     |    |     |    | 1  |
|                           |    |     |    |     | 4  |     | 2  | 7  |
| Oithona sp                |    | 1   |    |     |    |     |    |    |
| Setella sp                | 1  |     |    |     |    |     |    |    |
| Corycaeus affinis         | 44 | 46  | 45 | 29  | 48 | 8   | 5  | 4  |
| Corycaeus trukicus        |    |     |    | 5   |    |     |    |    |
| Copepoda larva            | 9  | 11  | 1  | 2   | 4  |     | 1  |    |
| Penilia schmackeri        |    |     |    |     |    |     | 2  | 7  |
| Evadne tergestina         |    |     |    |     |    |     |    |    |
| Hyperia galba             |    |     |    | 33  | 67 | 135 | 87 | 4  |
| Hyperia sp                |    |     |    |     | 37 | 11  | 12 | 4  |
| Themisto gracilipes       |    |     |    | 1   |    |     |    |    |
|                           |    |     |    |     | 11 | 20  | 1  |    |
| Themisto sp               |    |     |    |     |    |     |    |    |
| Euthemisto bispinosa      |    |     |    |     |    |     | 1  |    |
| Parathemisto obliqua      |    |     |    |     | 14 | 3   |    |    |
| Parathemisto sp           |    |     |    |     | 6  | 3   |    |    |
| Amphipoda larva           | 3  | 5   |    |     |    |     |    |    |
| Amphipoda sp              |    |     |    |     |    |     | 1  |    |
| Euphausia larva           |    |     |    |     | 4  | 3   |    |    |
| Euphausia sp              | 1  |     | 1  |     | 1  | 3   |    | 2  |
| Plagusia dentipes         |    |     |    | 8   | 1  |     |    |    |
| Brachyura larva           |    |     |    |     | 3  |     |    |    |
|                           |    |     |    | 5   |    |     |    |    |
| Polychaeta larva          |    | 2   | 3  | 2   |    |     |    |    |
| Ochiopluteus larva        | 14 | 8   | 19 | 4   | 4  |     | 1  |    |
| Oikopleura sp             | 1  | 2   | 2  |     |    |     |    |    |
| Pteropoda sp              |    |     |    |     | 16 | 7   | 6  | 2  |
| Noctiluca scintillans     | 7  | 242 | 39 | 22  | 10 | 1   |    |    |
| Fish egg                  |    |     |    | 1   |    |     |    |    |
| Pelagic egg               | 8  | 19  | 28 |     |    |     | 2  |    |
| Sagitta bedoti            |    |     |    | 13  | 4  |     |    |    |
| Sagitta crassa            |    |     |    | 32  | 27 |     |    |    |
| Sagitta larva             |    |     |    | 21  | 55 | 11  | 28 | 7  |
| Sagitta sp                | 2  | 3   |    | 14  |    |     |    |    |

| June |      |      |      | December |       |       |      |
|------|------|------|------|----------|-------|-------|------|
| 01   | 03   | 05   | 07   | 02       | 03    | 04    | 06   |
| 9    | 9    | 9    | 8    | 13       | 13    | 13    | 13   |
| 0830 | 0450 | 0110 | 2130 | 1720     | 1835  | 1950  | 2300 |
| 20   | 40   | 45   | 60   | 50       | 50    | 50    | 50   |
| 0.01 | 0.8  | 0.4  | 0.6  | 2.0      | 4.5   | 3.0   | 3.0  |
| 稀    | 26   | 18.5 | 13   | 92       | 300.1 | 162.3 | 65.5 |
| —    | —    | —    | —    | —        | —     | —     | —    |
| —    | —    | —    | —    | —        | —     | —     | —    |
| —    | —    | —    | —    | —        | —     | —     | —    |

## H. 307선 부유생물 조사표

## Plankton Data, Line 307

| Month                            | August |      |      |      | October |      |      | December |      |      |
|----------------------------------|--------|------|------|------|---------|------|------|----------|------|------|
| Station                          | 03     | 05   | 07   | 09   | 03      | 05   | 07   | 04       | 06   | 07   |
| Date                             | 27     | 27   | 27   | 27   | 20      | 20   | 20   | 9        | 9    | 9    |
| Time                             | 0145   | 0720 | 0935 | 1240 | 1150    | 0820 | 0450 | 0810     | 1040 | 1200 |
| Collected depth(m)               | 50     | 50   | 50   | 50   | 30      | 30   | 30   | 33       | 50   | 50   |
| Volume(cc)                       | 3.1    | 0.5  | 3.2  | 1.7  | 少       | 0.5  | 0.4  | 1.5      | 4.5  | 1.5  |
| Biomass(mg/m <sup>3</sup> )      | 58.4   | 13   | 68.6 | 16   | 5.6     | 26.6 | 28.5 | 4.6      | 35.5 | 12.5 |
| Rate of subsample                | 1/16   | 1/4  | 1/8  | 1/16 | —       | —    | —    | —        | —    | —    |
| No. of total organisms           | 258    | 171  | 180  | 259  | —       | —    | —    | —        | —    | —    |
| No. of total the other organisms | —      | —    | —    | —    | —       | —    | —    | —        | —    | —    |
| ZOOPLANKTON                      |        |      |      |      |         |      |      |          |      |      |
| Calanus helgolandicus            | 5      | 9    | 10   |      |         |      |      |          |      |      |
| Calanus helgolandicus juv        | 4      |      |      | 12   |         |      |      |          |      |      |
| Calanus larva                    |        |      |      | 1    |         |      |      |          |      |      |
| Paracalanus parvus               | 75     | 28   | 38   | 43   |         |      |      |          |      |      |
| Centropages abdominalis          | 3      | 1    |      |      |         |      |      |          |      |      |
| Labidocera euchaeta              | 16     |      |      |      |         |      |      |          |      |      |
| Labidocera euchaeta juv          | 24     |      |      |      |         |      |      |          |      |      |
| Acartia clausi                   | 10     | 24   | 24   |      |         |      |      |          |      |      |
| Tortanus discaudatus             | 10     |      |      |      |         |      |      |          |      |      |
| Oithona plumifera                |        | 1    | 5    | 79   |         |      |      |          |      |      |
| Oithona similis                  | 1      |      |      |      |         |      |      |          |      |      |
| Oithona nana                     | 2      | 17   | 12   | 18   |         |      |      |          |      |      |
| Oithona robusta                  |        |      |      | 4    |         |      |      |          |      |      |
| Oithona larva                    | 3      |      |      | 24   |         |      |      |          |      |      |
| Corycaeus affinis                | 18     | 15   | 11   | 6    |         |      |      |          |      |      |
| Copepoda larva                   | 1      | 1    | 1    | 1    |         |      |      |          |      |      |
| Penilia schmackeri               |        |      |      | 1    |         |      |      |          |      |      |
| Evadne tergestina                | 2      | 16   | 26   | 34   |         |      |      |          |      |      |
| Hyperia galba                    |        | 4    | 6    |      |         |      |      |          |      |      |
| Themisto gracilipes              |        | 3    |      |      |         |      |      |          |      |      |
| Themisto sp                      |        |      | 2    |      |         |      |      |          |      |      |
| Euthemisto bispinosa             |        | 13   | 1    |      |         |      |      |          |      |      |
| Amphipoda larva                  |        |      | 3    |      |         |      |      |          |      |      |
| Euphausia larva                  | 1      |      |      |      |         |      |      |          |      |      |
| Euphausia sp                     | 1      |      |      |      |         |      |      |          |      |      |
| Pandalid sp                      | 1      |      |      |      |         |      |      |          |      |      |
| Decapoda sp                      | 2      |      |      |      |         |      |      |          |      |      |
| Gastrosaccus indicus             | 4      |      |      |      |         |      |      |          |      |      |
| Mysidae sp                       | 1      |      |      |      |         |      |      |          |      |      |
| Brachyura larva                  | 2      | 2    |      |      |         |      |      |          |      |      |
| Oikopleura sp                    | 1      | 1    | 1    | 4    |         |      |      |          |      |      |
| Ophiopluteus larva               |        | 1    |      |      |         |      |      |          |      |      |
| Nectiluca scintillans            | 2      |      |      |      |         |      |      |          |      |      |
| Fish larva                       |        |      | 1    |      |         |      |      |          |      |      |
| Fish egg                         |        | 1    | 3    | 2    |         |      |      |          |      |      |
| Sagitta bedoti                   | 4      |      |      |      |         |      |      |          |      |      |
| Sagitta bipunctata               | 1      |      |      |      |         |      |      |          |      |      |
| Sagitta crassa                   | 27     |      |      |      |         |      |      |          |      |      |
| Sagitta larva                    | 35     | 34   | 34   | 16   |         |      |      |          |      |      |
| Pteropoda                        | 2      |      | 2    |      |         |      |      |          |      |      |

## I. 306선 부유생물 조사표

## Plankton Data, Line 306

| Month                            | August |      |      | December |
|----------------------------------|--------|------|------|----------|
| Station                          | 04     | 06   | 08   | 04       |
| Date                             | 27     | 27   | 27   | 8        |
| Time                             | 2310   | 1945 | 1045 | 1658     |
| Collected depth(m)               | 36     | 40   | 50   | 20       |
| Volume(cc)                       | 4.0    | 2.5  | 2.1  | 5.0      |
| Biomass (mg/m <sup>3</sup> )     | 117    | 762  | 42   | 71.5     |
| Rate of subsample                | 1/16   | 1/16 | 1/8  | —        |
| No. of total organisms           | 345    | 322  | 491  | —        |
| No. of total the other organisms | —      | —    | —    | —        |

## ZOOPLANKTON

|                           |     |     |     |
|---------------------------|-----|-----|-----|
| Calanus helgolandicus     | 8   | 2   | 12  |
| Calanus helgolandicus juv |     |     | 6   |
| Calanus larva             | 1   |     |     |
| Paracalanus parvus        | 228 | 43  | 48  |
| Centropages abdominalis   | 1   |     |     |
| Centropages larva         |     |     | 1   |
| Labidocera euchaeta       | 26  | 1   |     |
| Labidocera euchaeta juv   | 9   | 2   |     |
| Acartia clausi            | 15  |     | 18  |
| Acartia larva             |     |     | 2   |
| Oithona plumifera         |     | 1   | 13  |
| Oithona nana              |     | 2   | 44  |
| Oithona robusta           |     |     | 1   |
| Oithona larva             |     | 5   | 7   |
| Corycaeus affinis         | 7   | 7   | 52  |
| Copepoda larva            |     | 2   |     |
| Penilia schmackeri        |     |     | 20  |
| Evadne tergestina         |     | 12  | 137 |
| Corchoecia elegans        |     |     | 1   |
| Hyperia galba             | 1   |     | 12  |
| Themisto gracilipes       | 5   | 1   | 7   |
| Themisto sp               |     | 1   | 1   |
| Euthemisto sp             | 2   |     |     |
| Phronimela sp             | 1   |     |     |
| Amphipoda sp              | 1   |     |     |
| Euphausia larva           | 3   |     |     |
| Thyrea australis          |     |     | 1   |
| Thalassinid larva         |     | 1   |     |
| Euphausia sp              | 2   |     | 1   |
| Gastrosaccus indicus      |     | 1   | 1   |
| Plagusia dentipes         | 9   |     | 9   |
| Brachyura larva           |     | 1   |     |
| Oikopleura sp             |     | 3   | 3   |
| Ophiopluteus larva        |     | 1   |     |
| Fritillaria sp            |     | 8   |     |
| Noctiluca scintillans     |     | 201 | 2   |
| Fish egg                  |     |     | 5   |
| Pteropoda                 | 3   |     |     |
| Sagitta bedoti            | 8   |     | 7   |
| Sagitta crassa            |     |     | 2   |
| Sagitta larva             | 15  |     | 68  |
| Sagitta sp                |     | 27  |     |



제 5 편

특 별 해 양 관 측 성 적

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PART 5

MISCELLANEOUS OCEANOGRAPHIC OBSERVATIONS

1965



## 차 례

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동 해 해 양 조 사 성 적

OCEANOGRAPHIC OBSERVATIONS

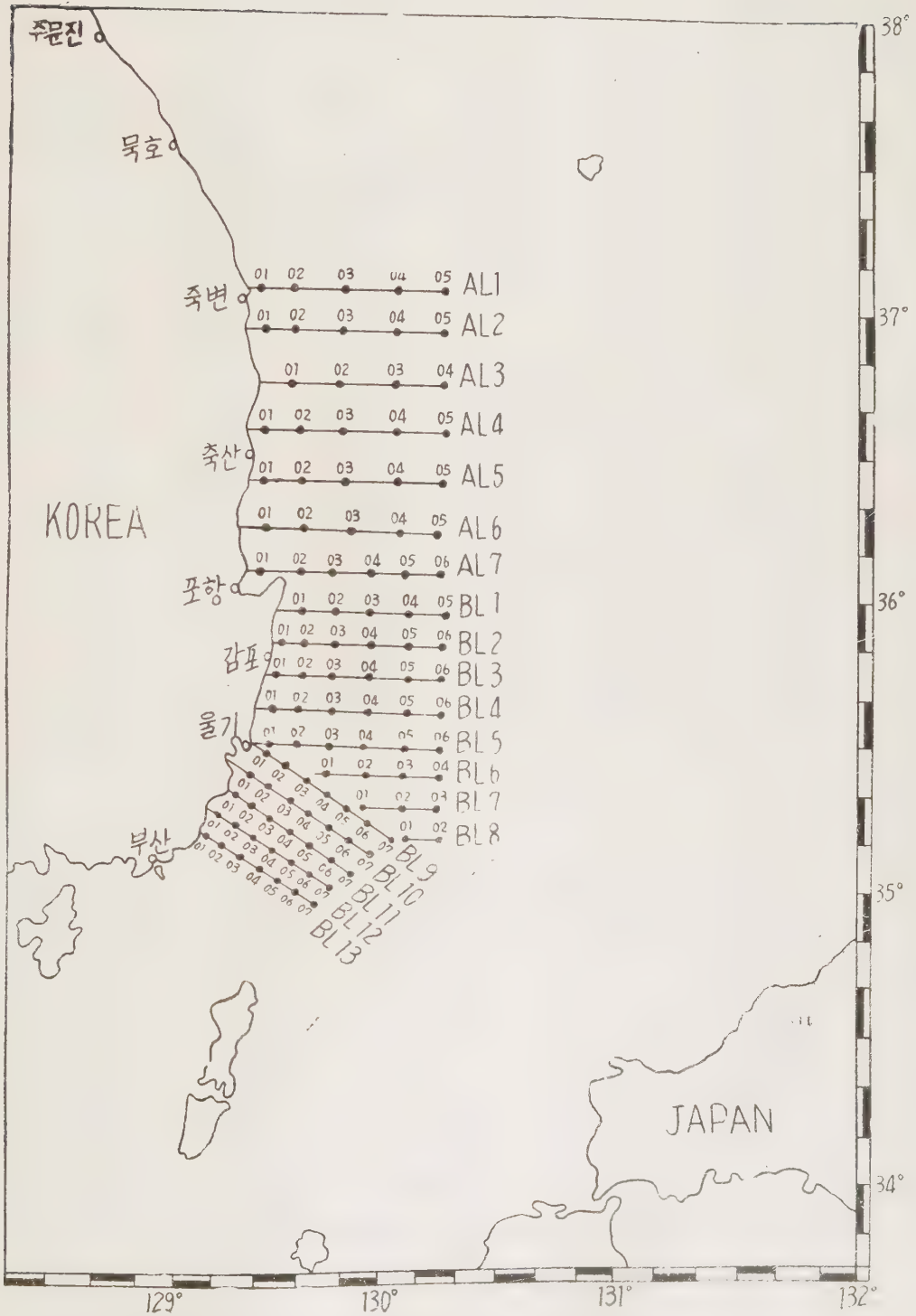
EAST COAST

1 9 6 5



# 동해 해양관측점 위치도(7월)

Station Locations, East Coast (July)



# 동해 해양관측점 위치표 (7월)

Station Positions, East Coast (July)

| Line<br>Sta No. | AL 1                        | AL 2                        | AL 3                        | AL 4                        | AL 5                        | AL 6                        |
|-----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 01              | 36° 14' 20"<br>129° 27' 30" | 36° 24' 00"<br>129° 27' 30" | 36° 44' 00"<br>129° 34' 00" | 36° 34' 00"<br>129° 27' 30" | 36° 54' 00"<br>129° 27' 30" | 37° 04' 00"<br>129° 27' 30" |
| 02              | 36° 14' 20"<br>129° 34' 00" | 36° 24' 00"<br>129° 34' 00" | 36° 44' 00"<br>129° 46' 00" | 36° 34' 00"<br>129° 34' 00" | 36° 54' 00"<br>129° 34' 00" | 37° 04' 00"<br>129° 34' 00" |
| 03              | 36° 14' 20"<br>129° 46' 00" | 36° 24' 00"<br>129° 46' 00" | 36° 44' 00"<br>129° 58' 30" | 36° 34' 00"<br>129° 46' 00" | 36° 54' 00"<br>129° 46' 00" | 37° 04' 00"<br>129° 46' 00" |
| 04              | 36° 14' 20"<br>129° 58' 30" | 36° 24' 00"<br>129° 58' 30" | 36° 44' 00"<br>130° 11' 00" | 36° 34' 00"<br>129° 58' 30" | 36° 54' 00"<br>129° 58' 30" | 37° 04' 00"<br>129° 58' 30" |
| 05              | 36° 14' 20"<br>130° 11' 00" | 36° 24' 00"<br>130° 11' 00" |                             | 36° 34' 00"<br>130° 11' 00" | 36° 54' 00"<br>130° 11' 10" | 37° 04' 00"<br>130° 11' 00" |

| Line<br>Sta No. | AL 7                        | BL 1                        | BL 2                        | BL 3                        | BL 4                        | BL 5                        |
|-----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 01              | 36° 04' 00"<br>129° 28' 00" | 35° 57' 35"<br>129° 37' 30" | 35° 50' 30"<br>129° 31' 30" | 35° 36' 30"<br>129° 31' 30" | 35° 43' 00"<br>129° 31' 30" | 35° 29' 30"<br>129° 31' 30" |
| 02              | 36° 04' 00"<br>129° 37' 30" | 35° 57' 35"<br>129° 46' 00" | 35° 50' 30"<br>129° 37' 30" | 35° 36' 30"<br>129° 37' 00" | 35° 43' 00"<br>129° 37' 30" | 35° 29' 30"<br>129° 37' 30" |
| 03              | 36° 04' 00"<br>129° 46' 00" | 35° 57' 35"<br>129° 54' 00" | 35° 50' 30"<br>129° 46' 00" | 35° 36' 30"<br>129° 46' 00" | 35° 43' 00"<br>129° 46' 00" | 35° 29' 30"<br>129° 46' 00" |
| 04              | 36° 04' 00"<br>129° 54' 10" | 35° 57' 35"<br>130° 03' 00" | 35° 50' 30"<br>129° 54' 00" | 35° 36' 30"<br>129° 54' 00" | 35° 43' 00"<br>129° 54' 00" | 35° 29' 30"<br>129° 54' 00" |
| 05              | 36° 04' 00"<br>130° 03' 00" | 35° 57' 35"<br>130° 11' 00" | 35° 50' 30"<br>130° 03' 00" | 35° 36' 30"<br>130° 03' 00" | 35° 43' 00"<br>130° 03' 00" | 35° 29' 30"<br>130° 03' 00" |
| 06              | 36° 04' 00"<br>130° 11' 00" |                             | 35° 50' 30"<br>130° 11' 00" | 35° 36' 30"<br>130° 11' 00" | 35° 43' 00"<br>130° 11' 00" | 35° 29' 30"<br>130° 11' 00" |

| Line<br>Sta No. | BL 6                        | BL 9                        | BL 11                       | BL 12                       | BL 13                       |
|-----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 01              | 35° 22' 30"<br>129° 46' 00" | 35° 12' 30"<br>129° 52' 00" | 35° 05' 00"<br>126° 45' 00" | 35° 01' 00"<br>129° 42' 00" | 35° 57' 00"<br>129° 38' 00" |
| 02              | 35° 22' 00"<br>129° 54' 00" | 35° 15' 00"<br>129° 48' 00" | 35° 08' 00"<br>129° 41' 00" | 35° 04' 00"<br>129° 37' 30" | 35° 00' 00"<br>129° 33' 30" |
| 03              | 35° 22' 00"<br>130° 03' 00" | 35° 18' 30"<br>129° 43' 00" | 35° 11' 00"<br>129° 36' 00" | 35° 27' 00"<br>129° 32' 30" | 35° 03' 00"<br>129° 29' 00" |
| 04              | 35° 22' 00"<br>130° 11' 00" | 35° 21' 30"<br>129° 38' 30" | 35° 14' 00"<br>129° 31' 00" | 35° 10' 00"<br>129° 28' 00" | 35° 06' 00"<br>129° 24' 30" |
| 05              |                             | 35° 24' 30"<br>129° 34' 00" | 35° 17' 00"<br>129° 27' 00" | 35° 13' 00"<br>129° 23' 30" | 35° 09' 00"<br>129° 20' 00" |
| 06              |                             | 35° 27' 10"<br>129° 29' 30" | 35° 20' 00"<br>129° 22' 00" | 35° 16' 00"<br>129° 19' 00" | 35° 12' 00"<br>129° 15' 30" |

## AL 선 해양관측성적 (7월)

Oceanographic Data, Line AL (July)

| Line           |              | AL 1  |       |        |       | AL 2  |       |       |       |
|----------------|--------------|-------|-------|--------|-------|-------|-------|-------|-------|
| Date           |              | July  |       |        |       | July  |       |       |       |
| Sta. No.       |              | 01    | 02    | 03     | 04    | 01    | 02    | 03    | 04    |
| Day            |              | 11    | 11    | 11     | 12    | 12    | 12    | 12    | 12    |
| Item           | Time<br>Z(m) | 1635  | 1730  | 1900   | 1155  | 1635  | 1545  | 1425  | 1310  |
| T<br>°C        | 0            | 18.4  | 18.4  | 18.1   | 19.9  | 18.5  | 18.6  | 17.0  | 20.5  |
|                | 10           | 18.2  | 18.0  | 17.6   | 19.4  | 18.1  | 17.8  | 15.0  | 19.9  |
|                | 25           | 15.9  | 16.6  | 16.3   | 16.7  | 16.6  | 16.3  | 14.2  | 16.8  |
|                | 50           | 9.5   | 8.5   | 13.8   | 14.7  | 8.4   | 9.0   | 11.5  | 15.0  |
|                | 100          | —     | 3.3   | 5.5    | 7.6   | —     | 2.9   | 3.6   | 6.5   |
|                | 150          | —     | 2.6   | 2.5    | 4.3   | —     | —     | 2.5   | 3.2   |
|                | 200          | —     | —     | 1.7    | 2.0   | —     | —     | 1.8   | 1.9   |
|                | Botm.        | 4.5   | 2.3   | —      | —     | 3.0   | 2.6   | —     | —     |
| S<br>‰         | 0            | 34.21 | 34.19 | 34.19  | 34.27 | 34.14 | 34.20 | 34.21 | 34.21 |
|                | 10           | 34.06 | 34.09 | 34.29  | 34.21 | 34.19 | 34.13 | 34.17 | 34.24 |
|                | 25           | 34.08 | 34.06 | 34.30  | 34.19 | 34.39 | 34.39 | 34.43 | 34.24 |
|                | 50           | 34.31 | 34.33 | 34.39  | 34.38 | 34.24 | 34.38 | 34.54 | 34.39 |
|                | 100          | —     | 34.30 | 34.57  | 34.44 | —     | 34.44 | 34.51 | 34.74 |
|                | 150          | —     | 34.20 | 34.29  | 34.38 | —     | —     | 34.20 | 34.31 |
|                | 200          | —     | —     | 34.22  | 34.14 | —     | —     | 34.13 | 34.17 |
|                | Botm.        | 34.32 | 34.19 | —      | —     | 34.14 | 34.18 | —     | —     |
| Dapth (m)      |              | 83    | 181   | —      | —     | 105   | 158   | —     | —     |
| Secchi (m)     |              | 13    | 11    | 14     | 20    | 11    | 12    | 7     | 17    |
| Color          |              | —     | —     | —      | —     | —     | —     | —     | —     |
| Sea            |              | 3     | 4     | 4      | 4     | 4     | 3     | 4     | 4     |
| Swell          |              | 2     | 3     | 3      | 8     | 2     | 2     | 3     | 3     |
| Air Temp. (°C) |              | 18.5  | 18.3  | 17.8   | 21.0  | 18.7  | 18.4  | 18.4  | 29.5  |
| Baro. (mm)     |              | 763   | 762   | 762    | 762   | 762   | 762   | 762   | 762   |
| Wind           |              | NW. 2 | W. 2  | SW. 4  | N. 2  | S. 5  | S. 4  | S. 3  | SE. 2 |
| Cloud          |              | St. 8 | St. 9 | Ci. 10 | St. 4 | St. 4 | St. 4 | St. 3 | St. 4 |
| Weather        |              | C     | C     | C      | BC    | BC    | BB    | BC    | BC    |

| Line           |              | AL 3  |       | AL 4  |       |       |       |
|----------------|--------------|-------|-------|-------|-------|-------|-------|
| Date           |              | July  |       | July  |       |       |       |
| Sta. No.       |              | 01    | 02    | 01    | 02    | 03    | 04    |
| Day            |              | 12    | 12    | 6     | 6     | 6     | 6     |
| Item           | Time<br>Z(m) | 1805  | 1920  | 1515  | 1410  | 1240  | 1110  |
| T<br>C         | 0            | 17.5  | 16.7  | 15.9  | 16.2  | 16.8  | 18.0  |
|                | 10           | 16.8  | 15.3  | 14.0  | 14.5  | 15.7  | 17.6  |
|                | 20           | —     | —     | —     | —     | —     | —     |
|                | 25           | 12.3  | 12.5  | 12.5  | 11.7  | 14.8  | 17.4  |
|                | 30           | —     | —     | —     | —     | —     | —     |
|                | 50           | 6.6   | 7.1   | 6.5   | 9.3   | 13.4  | 15.3  |
|                | 75           | —     | —     | —     | —     | —     | —     |
|                | 100          | 2.7   | 3.2   | —     | 3.0   | 2.8   | 9.0   |
|                | 150          | —     | —     | —     | 2.0   | 1.7   | 2.3   |
|                | 200          | —     | —     | —     | 1.6   | 1.3   | 1.4   |
|                | Botm.        | 2.2   | 2.5   | 1.8   | —     | —     | —     |
| S<br>‰         | 0            | 34.34 | —     | 34.44 | 34.24 | 34.34 | 34.09 |
|                | 10           | 34.25 | —     | 34.49 | 34.38 | 34.30 | 34.11 |
|                | 20           | —     | —     | —     | —     | —     | —     |
|                | 25           | —     | —     | 34.47 | 34.35 | 34.35 | 34.04 |
|                | 30           | —     | —     | —     | —     | —     | —     |
|                | 50           | —     | —     | 34.21 | 34.55 | 34.25 | 34.38 |
|                | 75           | —     | —     | —     | —     | —     | —     |
|                | 100          | —     | —     | —     | 34.11 | 34.14 | 34.47 |
|                | 150          | —     | —     | —     | 34.12 | 34.08 | 34.21 |
|                | 200          | —     | —     | —     | 34.05 | 33.90 | 34.07 |
|                | Botm.        | —     | —     | 34.12 | —     | —     | —     |
| Depth (m)      |              | 142   | 128   | 105   | 186   | 152   | —     |
| Secchi (m)     |              | 11    | 10    | 6     | 5     | 6     | 12    |
| Color          |              | —     | —     | —     | —     | —     | —     |
| Sea            |              | 4     | 4     | 3     | 3     | 4     | 4     |
| Swell          |              | 2     | 3     | 2     | 2     | 3     | 3     |
| Air Temp. (°C) |              | 18.1  | 17.6  | 19.0  | 18.0  | 18.3  | 20.5  |
| Baro. (mm)     |              | 761   | 761   | 766   | 766   | 766   | 765   |
| Wind           |              | SE. 4 | SE. 2 | N. 3  | N. 3  | N. 4  | N. 4  |
| Cloud          |              | St. 5 | St. 6 | St. 8 | Cc. 8 | Ci. 9 | Cc. 8 |
| Weather        |              | BC    | BC    | C     | C     | C     | C     |

| AL 5  |       |       |       | AL 6  |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|
| July  |       |       |       | July  |       |       |       |
| 01    | 02    | 03    | 04    | 01    | 02    | 03    | 04    |
| 5     | 5     | 6     | 6     | 5     | 5     | 5     | 5     |
| 1900  | 2000  | 0815  | 0940  | 1735  | 1640  | 1515  | 1355  |
| 15.7  | 18.0  | 18.5  | 19.1  | 15.4  | 16.1  | 15.9  | 19.7  |
| 14.4  | 13.9  | 17.5  | 18.8  | 12.6  | 12.7  | 15.2  | 19.3  |
| 11.0  | 12.5  | —     | —     | 11.3  | 10.0  | 14.3  | 18.9  |
| —     | —     | 16.5  | 17.9  | —     | —     | —     | —     |
| 7.6   | 10.9  | —     | —     | 9.3   | 8.2   | 12.7  | 17.6  |
| 4.6   | 7.4   | 12.3  | 15.3  | 4.4   | 5.3   | 9.8   | 16.0  |
| —     | 4.0   | —     | —     | —     | 2.7   | 7.6   | 14.7  |
| —     | 3.0   | 5.3   | 7.0   | —     | 2.2   | 4.5   | 10.2  |
| —     | 1.9   | 1.8   | 2.7   | —     | —     | 2.3   | 4.5   |
| —     | 1.6   | 1.5   | 1.6   | —     | —     | 2.1   | 2.6   |
| 3.4   | 1.6   | —     | —     | 3.0   | 1.8   | —     | —     |
| 34.49 | —     | 34.12 | 34.14 | 34.25 | 33.86 | 32.19 | 26.91 |
| 34.35 | 34.48 | 34.29 | 34.10 | 14.44 | 32.44 | 32.69 | 28.88 |
| 34.10 | 34.39 | —     | —     | 34.25 | 32.37 | 33.67 | 29.08 |
| —     | —     | 34.29 | 34.41 | —     | —     | —     | —     |
| 33.94 | 34.35 | —     | —     | 33.76 | 32.44 | 33.10 | 30.90 |
| 34.17 | 34.14 | 34.39 | 34.63 | 33.82 | 33.63 | 33.27 | 28.37 |
| —     | 34.07 | —     | —     | 34.21 | 32.68 | 32.21 | 33.53 |
| —     | 34.20 | 34.06 | 34.34 | —     | 33.13 | 32.43 | 33.01 |
| —     | 34.07 | 34.01 | 34.16 | —     | —     | 32.88 | 32.62 |
| —     | —     | 33.72 | 34.01 | —     | —     | 32.64 | 33.16 |
| —     | 34.06 | —     | —     | 34.00 | 33.23 | —     | —     |
| 74    | 177   | —     | —     | 79    | 125   | 189   | —     |
| 6     | 8     | 8     | 13    | 7     | 5     | 7     | 12    |
| —     | —     | —     | —     | —     | —     | —     | —     |
| 3     | 3     | 3     | 4     | 3     | 3     | 4     | 4     |
| 1     | 1     | 2     | 3     | 1     | 2     | 2     | 3     |
| 20.8  | 20.5  | 19.0  | 20.7  | 21.0  | 20.7  | 20.3  | 20.0  |
| 759   | 760   | 763   | 763   | 759   | 759   | 759   | 759   |
| W. 4  | W. 2  | N. 3  | N. 3  | W. 3  | W. 3  | W. 4  | W. 4  |
| Cs. 3 | St. 3 | Cc. 6 | Cc. 8 | St. 4 | St. 2 | Cs. 2 | St. 2 |
| BC    | BC    | BC    | C     | BC    | R     | B     | B     |



| Line           |              | AL 7  |       |       |       |       |
|----------------|--------------|-------|-------|-------|-------|-------|
| Date           |              | July  |       |       |       |       |
| Sta. No.       |              | 01    | 02    | 03    | 04    | 05    |
| Day            |              | 3     | 5     | 5     | 5     | 5     |
| Item           | Time<br>Z(m) | 1745  | 0932  | 1035  | 1135  | 1238  |
| T<br>°C        | 0            | 17.5  | 15.5  | 16.9  | 19.1  | 20.3  |
|                | 10           | —     | 13.2  | 16.6  | 18.8  | 19.8  |
|                | 20           | —     | 10.6  | 16.2  | 18.6  | 19.6  |
|                | 30           | —     | 8.3   | 15.5  | 18.2  | 19.5  |
|                | 50           | —     | 6.6   | 13.3  | 16.3  | 16.4  |
|                | 75           | —     | —     | —     | 14.4  | 15.0  |
|                | 100          | —     | —     | 5.1   | 13.0  | 13.8  |
|                | 150          | —     | —     | 2.2   | 4.0   | 4.4   |
|                | 200          | —     | —     | 2.0   | 2.0   | 2.1   |
|                | Botm.        | 10.7  | 4.2   | —     | —     | —     |
| S<br>‰         | 0            | 34.43 | 34.47 | 34.21 | 34.29 | 34.22 |
|                | 10           | —     | 34.50 | 34.36 | 34.13 | —     |
|                | 20           | —     | 34.39 | 34.36 | 34.24 | —     |
|                | 30           | —     | 34.29 | 34.43 | 34.35 | —     |
|                | 50           | —     | 34.16 | 34.17 | 34.51 | —     |
|                | 75           | —     | —     | —     | 34.60 | —     |
|                | 100          | —     | —     | 34.25 | 34.16 | —     |
|                | 150          | —     | —     | 34.34 | 34.07 | —     |
|                | 200          | —     | —     | 34.20 | 34.20 | —     |
|                | Botm.        | 34.47 | 34.38 | —     | —     | —     |
| Depth (m)      |              | 15    | 86    | —     | —     | —     |
| Secchi (m)     |              | 4     | 8     | 12    | 13    | 15    |
| Color          |              | —     | —     | —     | —     | —     |
| Sea            |              | 4     | 4     | 5     | 4     | 4     |
| Swell          |              | 2     | 2     | 2     | 2     | 3     |
| Air Temp. (°C) |              | 21.7  | 22.3  | 22.2  | 22.4  | 22.3  |
| Baro. (mm)     |              | 760   | 758   | 758   | 759   | 759   |
| Wind           |              | S. 4  | SW. 4 | S. 5  | SW. 4 | SW. 5 |
| Cloud          |              | Cc. 7 | St. 3 | St. 3 | St. 1 | St. 3 |
| Weather        |              | BC    | BC    | BC    | B     | BC    |

# BL 선 해양관측성적 (7월)

Oceanographic Data, Line BL (July)

| Line           |              | BL 1  |        |       |       | BL 2   |       |       |       |       |
|----------------|--------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|
| Date           |              | July  |        |       |       | July   |       |       |       |       |
| Sta. No.       |              | 01    | 02     | 03    | 04    | 01     | 02    | 03    | 04    | 05    |
| Day            |              | 15    | 16     | 17    | 17    | 17     | 17    | 17    | 17    | 17    |
| Item           | Time<br>Z(m) | 1000  | 2115   | 0750  | 0850  | 1340   | 1255  | 1153  | 1055  | 0955  |
| T<br>°C        | 0            | 15.0  | 16.7   | 16.2  | 17.2  | 14.5   | 14.9  | 15.5  | 16.2  | 17.0  |
|                | 10           | 14.0  | 15.1   | 16.7  | 17.0  | 14.0   | 13.5  | 15.1  | 15.3  | 16.7  |
|                | 25           | 12.7  | 10.6   | 12.5  | 13.2  | 11.5   | 11.3  | 13.5  | 14.6  | 14.9  |
|                | 50           | 7.8   | 6.3    | 8.2   | 9.8   | —      | 5.5   | 10.1  | 13.8  | 13.5  |
|                | 100          | —     | 2.3    | 3.2   | 3.6   | —      | 3.8   | 3.3   | 6.0   | 7.3   |
|                | 150          | —     | 1.5    | 2.5   | 2.0   | —      | —     | 1.8   | 2.6   | 2.5   |
|                | 200          | —     | 1.3    | 1.8   | 1.7   | —      | —     | 1.5   | 1.6   | 1.3   |
| Botm.          |              | 4.3   | —      | —     | —     | 6.0    | 3.0   | —     | —     | —     |
| S<br>‰         | 0            | —     | —      | —     | —     | —      | —     | —     | —     | —     |
|                | 10           | —     | —      | —     | —     | —      | —     | —     | —     | —     |
|                | 25           | —     | —      | —     | —     | —      | —     | —     | —     | —     |
|                | 50           | —     | —      | —     | —     | —      | —     | —     | —     | —     |
|                | 100          | —     | —      | —     | —     | —      | —     | —     | —     | —     |
|                | 150          | —     | —      | —     | —     | —      | —     | —     | —     | —     |
|                | 200          | —     | —      | —     | —     | —      | —     | —     | —     | —     |
| Botm.          |              | —     | —      | —     | —     | —      | —     | —     | —     | —     |
| Depth (m)      |              | 82    | —      | —     | —     | 80     | —     | —     | —     | —     |
| Secchi (m)     |              | 9     | —      | 6     | 8     | 7      | 8     | 8     | 7     | 9     |
| Color          |              | —     | —      | —     | —     | —      | —     | —     | —     | —     |
| Sea            |              | 6     | 4      | 5     | 5     | 4      | 5     | 5     | 5     | 4     |
| Swell          |              | 3     | 2      | 2     | 2     | 3      | 3     | 3     | 3     | 2     |
| Air Temp. (°C) |              | 18.0  | 17.5   | 18.6  | 18.4  | 18.0   | 18.5  | 18.7  | 18.7  | 18.3  |
| Baro. (mm)     |              | 770   | 765    | 764   | 764   | 763    | 763   | 763   | 763   | 763   |
| Wind           |              | S. 8  | S. 4   | E. 3  | S. 3  | S. 5   | S. 6  | S. 4  | S. 3  | S. 2  |
| Cloud          |              | St. 5 | Co. 10 | St. 5 | St. 3 | St. 10 | St. 9 | St. 7 | St. 9 | St. 9 |
| Weather        |              | BC    | C      | R     | C     | R      | C     | R     | C     | C     |

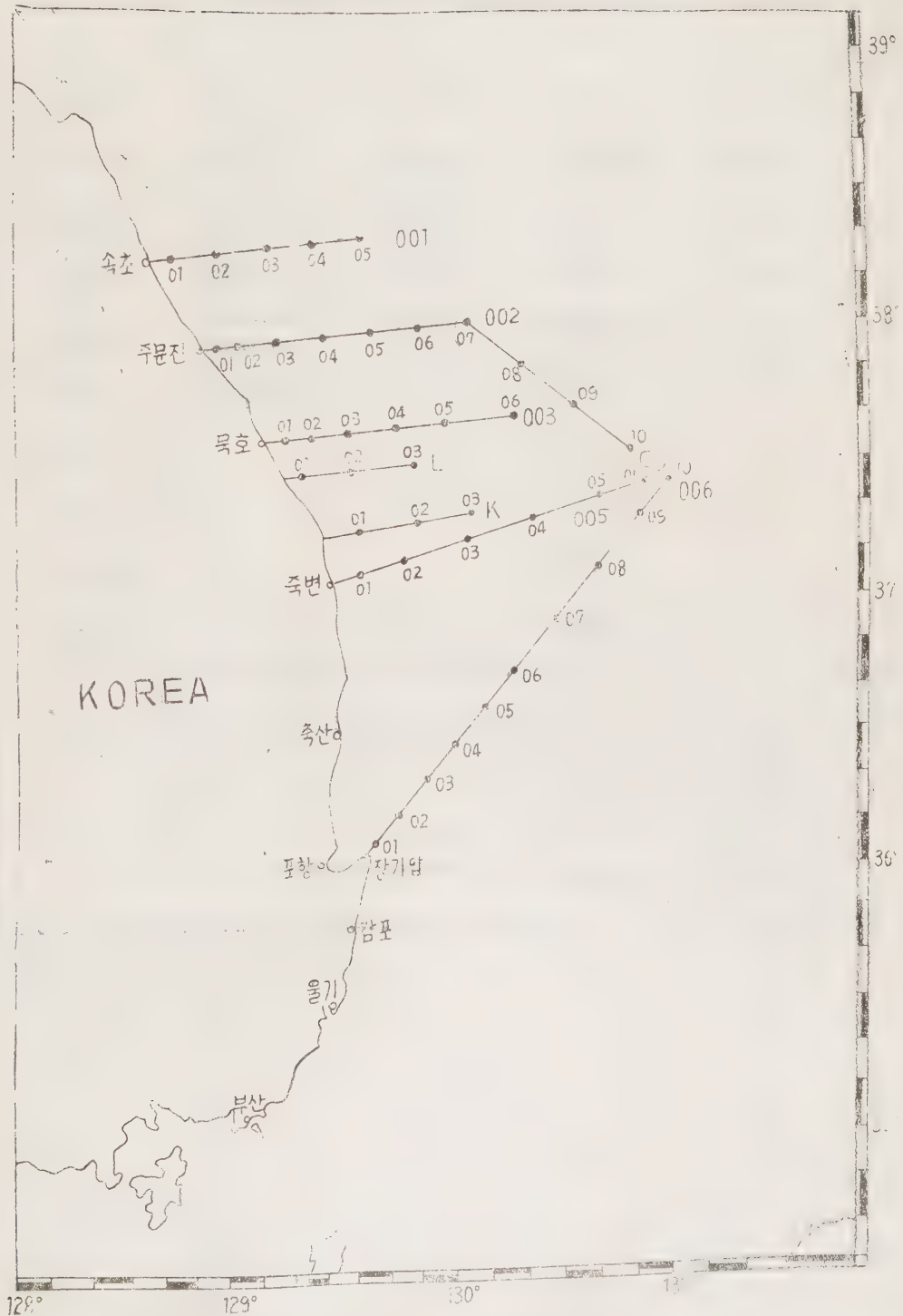
| Line           |       | BL 3  |       |       |       |       | BL 4  |       |       |       |       |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Date           |       | July  |       |       |       |       | July  |       |       |       |       |
| Sta. No.       |       | 01    | 02    | 03    | 04    | 05    | 01    | 02    | 03    | 04    | 05    |
| Day            |       | 18    | 18    | 18    | 18    | 18    | 18    | 18    | 18    | 18    | 18    |
| Item           | Time  | 0745  | 0820  | 0910  | 1010  | 1110  | 1554  | 1510  | 1410  | 1310  | 1210  |
|                | Z(m)  |       |       |       |       |       |       |       |       |       |       |
| T<br>°C        | 0     | 14.3  | 14.6  | 16.1  | 18.4  | 20.9  | 17.4  | 17.5  | 18.0  | 20.4  | 20.8  |
|                | 10    | 13.8  | 14.4  | 15.7  | 18.3  | 20.5  | 14.7  | 15.2  | 17.3  | 19.3  | 20.5  |
|                | 25    | 12.5  | 13.5  | 14.7  | 15.5  | 17.7  | 13.5  | 14.5  | 15.5  | 16.6  | 17.5  |
|                | 50    | —     | 11.4  | 13.6  | 15.0  | 15.3  | 8.8   | 13.5  | 14.5  | 15.0  | 15.4  |
|                | 100   | —     | —     | 4.5   | 5.4   | 13.5  | —     | 4.4   | 6.7   | 11.6  | 13.5  |
|                | 150   | —     | —     | 3.0   | 3.2   | 3.5   | —     | —     | 3.0   | 2.5   | 3.0   |
|                | 200   | —     | —     | 2.5   | 2.3   | 2.0   | —     | —     | —     | 2.2   | 2.1   |
|                | Botm. | 8.6   | 4.3   | —     | —     | —     | 5.3   | 3.5   | 2.6   | —     | —     |
| S<br>‰         | 0     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 10    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 25    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 50    | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 100   | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 150   | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | 200   | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
|                | Botm. | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
| Depth (m)      |       | 40    | 108   | —     | —     | —     | 70    | 122   | 165   | 206   | —     |
| Secchi (m)     |       | 7     | 5     | 6     | 6     | 9     | 5.5   | 6.5   | 6.5   | 7.5   | 10    |
| Color          |       | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
| Sea            |       | 3     | 4     | 3     | 4     | 3     | 4     | 4     | 4     | 4     | 4     |
| Swell          |       | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     |
| Air Temp. (°C) |       | 19.0  | 19.3  | 19.6  | 19.8  | 22.3  | 19.5  | 19.8  | 21.3  | 22.7  | 22.   |
| Baro. (mm)     |       | 764   | 764   | 764   | 764   | 764   | 763   | 763   | 763   | 764   | 764   |
| Wind           |       | W. 2  | N. 2  | N. 3  | NE. 4 | NE. 3 | S. 4  | SW. 5 | S. 4  | S. 4  | S. 4  |
| Cloud          |       | Cs. 8 | St. 7 | St. 7 | St. 8 | St. 5 | St. 9 | St. 5 | St. 4 | St. 5 | St. 4 |
| Weather        |       | C     | BC    | BC    | C     | BC    | C     | BC    | BC    | BC    | BC    |

| BL 5  |       |       |       |         | BL 6  |       |       |
|-------|-------|-------|-------|---------|-------|-------|-------|
| July  |       |       |       |         | July  |       |       |
| 01    | 02    | 03    | 04    | 05      | 01    | 02    | 03    |
| 19    | 19    | 19    | 19    | 19      | 19    | 19    | 19    |
| 0620  | 0715  | 0810  | 0915  | 1015    | 1330  | 1230  | 1130  |
| 15.1  | 18.1  | 19.4  | 20.0  | 21.0    | 21.2  | 21.2  | 21.0  |
| 15.0  | 17.8  | 19.5  | 19.6  | 20.2    | 21.0  | 20.5  | 20.3  |
| 14.2  | 16.3  | 18.7  | 15.9  | 19.0    | 18.3  | 18.0  | 17.3  |
| 12.9  | 14.4  | 16.2  | 14.9  | 15.2    | 16.3  | 15.8  | 15.2  |
| —     | 8.5   | 14.3  | 13.7  | 13.7    | 14.7  | 14.2  | 13.7  |
| —     | —     | —     | —     | 5.2     | —     | 7.8   | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| 3.6   | 5.8   | 3.5   | 2.2   | 2.6     | 4.2   | 6.3   | 6.9   |
| —     | —     | —     | —     | —       | —     | —     | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| —     | —     | —     | —     | —       | —     | —     | —     |
| 98    | 131   | 139   | 152   | 172     | 149   | 167   | 148   |
| 5     | 5     | 5     | 6     | 6.5     | 5.5   | 11.5  | 6.5   |
| —     | —     | —     | —     | —       | —     | —     | —     |
| 4     | 4     | 4     | 4     | 5       | 6     | 5     | 4     |
| 2     | 2     | 2     | 2     | 2       | 3     | 3     | 2     |
| 16.7  | 20.2  | 21.3  | 21.0  | 22.2    | 22.7  | 22.8  | 22.8  |
| 765   | 765   | 765   | 765   | 765     | 765   | 765.5 | 765   |
| S. 5  | S. 8  | S. 5  | S. 4  | S. 4    | SW 6  | SW. 6 | S. 5  |
| St. 8 | St. 8 | St. 8 | Cs. 7 | Sec. 10 | St. 9 | St. 9 | Cs. 9 |
| C     | C     | C     | C     | R       | C     | C     | C     |

| Line           |      | BL 9  |       |       | BL 11 |      |       | BL 12 | BL 13 |       |       |
|----------------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Date           |      | July  |       |       | July  |      |       | July  | July  |       |       |
| Sta. No.       |      | 01    | 03    | 05    | 01    | 03   | 05    | 01    | 01    | 03    | 05    |
| Day            |      | 19    | 19    | 19    | 20    | 20   | 20    | 20    | 20    | 20    | 20    |
| Item           | Time | 0545  | 1425  | 1335  | 0925  | 1035 | 1145  | 1820  | 1545  | 1430  | 1315  |
|                | Z(m) |       |       |       |       |      |       |       |       |       |       |
| T              | 0    | 15.3  | 20.6  | 31.2  | 16.6  | 21.5 | 22.3  | 17.7  | 18.5  | 22.3  | 22.4  |
|                | 10   | 15.1  | 20.7  | 21.4  | 16.0  | 21.1 | 21.7  | 16.3  | 16.4  | 21.5  | 21.0  |
|                | 25   | 13.9  | 19.8  | 18.7  | 13.6  | 16.5 | 18.5  | 13.0  | 13.8  | 17.0  | 18.2  |
|                | 50   | 12.7  | 15.7  | 16.7  | 9.5   | 14.2 | 15.5  | —     | 10.1  | 14.4  | 17.3  |
|                | 100  | —     | 13.8  | 14.7  | —     | 8.2  | 12.0  | —     | —     | 9.0   | 14.7  |
| C              | 150  | —     | —     | —     | —     | —    | —     | —     | —     | —     | 12.3  |
| Botm.          |      | 4.1   | 3.7   | 7.5   | 7.3   | 3.7  | 8.3   | 7.9   | 8.3   | 5.6   | 5.2   |
| S              | 0    | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
|                | 10   | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
|                | 25   | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
|                | 50   | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
|                | 100  | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
| %              | 150  | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
| Botm.          |      | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
| Depth (m)      |      | 94    | 134   | 152   | 75    | 122  | 158   | 57    | 72    | 116   | 169   |
| Secchi (m)     |      | —     | 6     | 6     | 4     | 6    | 6     | 4     | 5     | 5     | 12.5  |
| Color          |      | —     | —     | —     | —     | —    | —     | —     | —     | —     | —     |
| Sea            |      | 3     | 5     | 6     | 4     | 4    | 4     | 3     | 4     | 4     | 5     |
| Swell          |      | 2     | 3     | 3     | 2     | 2    | 2     | 2     | 2     | 2     | 3     |
| Air Temp. (°C) |      | 16.4  | 22.7  | 24.2  | 20.2  | 23.0 | 23.4  | 20.0  | 21.3  | 23.8  | 23.7  |
| Baro. (mm)     |      | 765   | 765   | 765   | 766   | 766  | 765   | 765   | 765   | 765   | 765   |
| Wind           |      | S. 4  | SW. 5 | SW. 6 | S. 4  | S. 5 | S. 5  | SW. 4 | SW. 5 | SW. 5 | SW. 5 |
| Cloud          |      | St. 9 | Cs. 5 | St. 8 | St. 8 | S. 8 | Cs. 8 | St. 9 | St. 9 | Cs. 9 | St. 9 |
| Weather        |      | C     | BC    | C     | C     | C    | C     | C     | C     | C     | C     |

# 동해 해양관측점 위치도(7~10월)

Station Locations, East Coast (Jul. ~Oct.)



# 동해 해양관측점 위치표(7~10월)

Station Positions, East Coast (Jul.~Oct.)

| Line     | 001                     | 002                     | 003                     | 005                     | 006                     |
|----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Sta. No. |                         |                         |                         |                         |                         |
| 01       | 38°10'20"<br>128°40'55" | 37°54'00"<br>128°52'42" | 37°33'45"<br>129°10'50" | 37°04'04"<br>129°31'15" | 36°07'12"<br>129°33'30" |
| 02       | 38°12'30"<br>128°53'05" | 37°54'30"<br>128°59'00" | 37°34'30"<br>129°16'40" | 37°08'32"<br>129°43'42" | 36°15'00"<br>129°41'10" |
| 03       | 38°14'00"<br>129°06'00" | 37°56'09"<br>129°15'00" | 37°35'55"<br>129°21'45" | 37°13'40"<br>130°01'00" | 36°23'00"<br>129°48'50" |
| 04       | 38°15'15"<br>129°18'30" | 37°57'24"<br>129°27'30" | 37°36'45"<br>129°39'00" | 37°18'30"<br>130°18'40" | 36°30'50"<br>129°56'10" |
| 05       | 38°16'40"<br>129°31'05" | 37°58'35"<br>129°39'52" | 37°38'30"<br>129°51'30" | 37°23'30"<br>130°36'20" | 36°38'30"<br>130°04'00" |
| 06       |                         | 37°58'35"<br>129°52'11" | 37°40'15"<br>130°10'00" | 37°26'45"<br>130°48'00" | 36°46'20"<br>130°11'50" |
| 07       |                         | 38°00'48"<br>130°04'40" |                         |                         | 36°58'00"<br>130°23'00" |
| 08       |                         | 37°51'22"<br>130°19'30" |                         |                         | 37°10'00"<br>130°34'30" |
| 09       |                         | 37°42'20"<br>130°34'00" |                         |                         | 37°21'40"<br>130°46'30" |
| 10       |                         | 37°33'00"<br>130°48'40" |                         |                         | 37°26'15"<br>130°55'00" |
| Line     | K                       | L                       |                         |                         |                         |
| Sta. No. |                         |                         |                         |                         |                         |
| 01       | 37°15'00"<br>129°33'45" | 37°22'10"<br>129°17'30" |                         |                         |                         |
| 02       | 37°18'00"<br>129°51'45" | 37°28'55"<br>129°30'00" |                         |                         |                         |
| 03       | 37°19'05"<br>130°04'00" | 37°30'35"<br>129°47'45" |                         |                         |                         |



동해 해양관측 성적 (7월)  
Oceanographic Data, East Coast (July)

| Line           |       | 003    |        |        |        |        | L     |       |       | K     |       |       |
|----------------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| Date           |       | July   |        |        |        |        | July  |       |       | July  |       |       |
| Sta. No.       |       | 01     | 02     | 03     | 04     | 05     | 01    | 02    | 03    | 01    | 02    | 03    |
| Day            |       | 9      | 9      | 9      | 10     | 10     | 11    | 11    | 11    | 11    | 11    | 11    |
| Time           |       |        |        |        |        |        |       |       |       |       |       |       |
| Item           | Z(m)  | 1630   | 1720   | 1845   | 0820   | 0950   | 0640  | 0810  | 0955  | 1440  | 1310  | 1145  |
| T<br>℃         | 0     | 19.5   | 19.0   | 18.5   | 19.6   | 18.0   | 17.5  | 17.4  | 17.4  | 17.8  | 17.9  | 19.6  |
|                | 10    | 16.8   | 18.2   | 16.5   | 18.0   | 17.6   | 17.4  | 17.5  | 17.3  | 16.7  | 17.6  | 19.5  |
|                | 25    | 11.4   | 9.0    | 10.9   | 9.6    | 13.5   | 14.6  | 16.1  | 9.2   | 9.5   | 12.0  | 17.5  |
|                | 50    | —      | 5.0    | 4.7    | 5.5    | 8.5    | 6.5   | 6.1   | 8.0   | 5.7   | 5.8   | 14.0  |
|                | 100   | —      | 2.7    | 2.5    | 2.7    | 3.0    | 3.1   | 2.7   | 2.7   | 2.6   | 2.8   | 3.6   |
|                | 150   | —      | 2.0    | 1.7    | 2.0    | 1.4    | —     | 2.1   | 2.1   | —     | 2.4   | 2.5   |
|                | 200   | —      | 1.7    | 1.6    | 1.5    | 1.2    | —     | 1.6   | 1.5   | —     | 1.6   | 1.4   |
|                | Botm. | 8.8    | —      | —      | —      | —      | —     | —     | —     | 2.0   | —     | —     |
| S<br>‰         | 0     | 34.03  | 33.94  | 34.07  | 34.12  | 34.33  | 34.25 | 34.48 | 34.16 | —     | 34.22 | 34.20 |
|                | 10    | 34.36  | 34.21  | 34.29  | 34.41  | 34.39  | 34.20 | 34.39 | 34.36 | —     | 34.37 | 34.28 |
|                | 25    | 34.23  | 34.25  | 34.46  | 34.22  | 34.49  | 34.52 | 34.49 | 34.38 | 34.31 | 34.34 | 34.24 |
|                | 50    | —      | 34.07  | 34.08  | 34.00  | 34.44  | 34.11 | 34.20 | 34.41 | 34.40 | 34.51 | 34.33 |
|                | 100   | —      | 33.97  | 34.03  | 34.06  | 34.30  | 34.18 | 34.17 | 34.47 | 34.29 | 34.20 | 34.51 |
|                | 150   | —      | 34.17  | 34.13  | 34.06  | 34.16  | —     | 34.14 | 34.28 | —     | 34.16 | 34.16 |
|                | 200   | —      | 34.03  | 34.04  | 34.28  | 34.17  | —     | 34.20 | 34.23 | —     | 34.15 | 34.15 |
|                | Botm. | 34.18  | —      | —      | —      | —      | 34.22 | —     | —     | 34.21 | —     | —     |
| Depth (m)      |       | 53     | —      | —      | —      | —      | 155   | —     | —     | 148   | —     | —     |
| Secchi (m)     |       | 12     | 15     | 15.5   | 16     | 12     | 12    | 13    | 10    | 13    | 12    | 13    |
| Color          |       | —      | —      | —      | —      | —      | —     | —     | —     | —     | —     | —     |
| Sea            |       | 3      | 3      | 4      | 4      | 5      | 4     | 4     | 4     | 4     | 4     | 5     |
| Swell          |       | 2      | 2      | 2      | 2      | 3      | 2     | 2     | 2     | 3     | 3     | 3     |
| Air Temp. (°C) |       | 19.3   | 19.1   | 18.8   | 19.7   | 19.5   | 17.8  | 17.2  | 17.5  | 18.9  | 19.7  | 18.0  |
| Baro. (mm)     |       | 762    | 761    | 761    | 761    | 761    | 763   | 763   | 763   | 763   | 764   | 763   |
| Wind           |       | N.3    | N.3    | N.3    | S.5    | S.7    | N.4   | N.3   | N.4   | N.3   | NW.3  | NW.5  |
| Cloud          |       | Cc. 10 | Cc. 10 | Cc. 10 | Cc. 10 | Cc. 10 | St. 8 | St. 7 | St. 8 | St. 8 | St. 9 | St. 8 |
| Weather        |       | C      | C      | C      | C      | C      | C     | BC    | C     | C     | C     | C     |



동해 해양관측 성적 (9월)  
Oceanographic Data, East Coast (September)

| Line           |              | 005       |       |       |       |       |       |
|----------------|--------------|-----------|-------|-------|-------|-------|-------|
| Date           |              | September |       |       |       |       |       |
| Sta. No.       |              | 01        | 02    | 03    | 04    | 05    | 06    |
| Day            |              | 29        | 29    | 29    | 29    | 29    | 29    |
| Item           | Time<br>Z(m) | 2300      | 2130  | 1600  | 1145  | 0910  | 0730  |
| T<br>°C        | 0            | 20.90     | 22.60 | 21.80 | 22.20 | 22.00 | 21.80 |
|                | 10           | 20.90     | 22.03 | 22.31 | 22.14 | 22.40 | 21.82 |
|                | 20           | 20.95     | 21.47 | 22.01 | 22.28 | 22.13 | 22.03 |
|                | 30           | 17.93     | 21.17 | 21.81 | 21.93 | 21.98 | 21.72 |
|                | 50           | 15.08     | 17.39 | 21.59 | 17.85 | 17.03 | 16.68 |
|                | 75           | 11.03     | 13.92 | 15.24 | 15.54 | 15.19 | 15.44 |
|                | 100          | 6.67      | 8.57  | 12.53 | 13.98 | 14.10 | 16.42 |
|                | 150          | —         | 5.73  | 8.36  | 8.56  | 8.70  | 7.75  |
|                | 200          | —         | 2.00  | 4.18  | 2.76  | 4.46  | 3.37  |
| Botm.          |              | —         | —     | —     | —     | —     | —     |
| S<br>‰         | 0            | 32.81     | 32.86 | 32.84 | 32.80 | 32.76 | 32.99 |
|                | 10           | 32.81     | 32.79 | 32.81 | 32.85 | 32.80 | 32.96 |
|                | 20           | 32.81     | 32.79 | 33.03 | 32.92 | 32.76 | 33.04 |
|                | 30           | 32.82     | 32.82 | 34.53 | 32.96 | 33.00 | 33.12 |
|                | 50           | 33.81     | 33.94 | 34.53 | 32.92 | 34.54 | 34.56 |
|                | 75           | —         | —     | —     | —     | —     | 34.57 |
|                | 100          | —         | —     | —     | —     | —     | 34.78 |
|                | 150          | —         | —     | —     | —     | —     | —     |
|                | 200          | —         | —     | —     | —     | —     | —     |
| Botm.          |              | —         | —     | —     | —     | —     | —     |
| Depth (m)      |              | —         | —     | —     | —     | —     | —     |
| Secchi (m)     |              | —         | —     | —     | 14    | —     | 21    |
| Color          |              | —         | —     | —     | —     | —     | —     |
| Sea            |              | 3         | 3     | 3     | 2     | 1     | 2     |
| Swell          |              | 3         | 3     | 3     | 2     | 2     | 2     |
| Air Temp. (°C) |              | 21.0      | 21.7  | 22.6  | 21.8  | 20.1  | 18.3  |
| Baro. (mm)     |              | —         | —     | —     | —     | —     | —     |
| Wind           |              | SW. 3     | SW. 3 | SW. 6 | W. 3  | NW    | NW. 2 |
| Cloud          |              | —         | —     | 0     | 0     | Cl. 2 | Cl. 1 |
| Weather        |              | B         | B     | B     | B     | B     | B     |

| 006       |       |       |       |       |       |
|-----------|-------|-------|-------|-------|-------|
| September |       |       |       |       |       |
| 02        | 03    | 04    | 05    | 06    | 10    |
| 27        | 27    | 27    | 27    | 27    | 29    |
| 0730      | 0900  | 1040  | 1215  | 1355  | 0630  |
| 22.70     | 23.10 | 22.50 | 22.40 | 22.30 | 22.00 |
| 22.83     | 22.37 | 22.29 | 21.11 | 21.68 | 22.04 |
| 22.64     | 23.26 | 21.93 | 22.48 | 22.36 | 21.13 |
| 19.49     | 21.57 | 23.54 | 21.34 | 21.15 | 20.07 |
| 13.61     | 15.63 | 15.43 | 21.42 | 18.69 | 17.63 |
| 10.18     | 12.35 | 11.69 | 15.14 | 16.31 | 15.20 |
| 6.93      | 6.90  | 8.56  | 10.58 | 14.53 | 12.46 |
| —         | 2.88  | 2.56  | 3.69  | 7.22  | 6.32  |
| —         | 1.34  | 1.29  | 1.75  | 2.92  | 2.59  |
| 3.72      | —     | —     | —     | —     | —     |
| 32.86     | 32.95 | 32.62 | 32.54 | 32.54 | 32.96 |
| 32.89     | 33.00 | 32.64 | 32.48 | 32.48 | 32.98 |
| 32.84     | 32.97 | 33.03 | 32.51 | 32.44 | 33.01 |
| 34.53     | 32.99 | 33.52 | 33.62 | 32.64 | 33.07 |
| 34.52     | 34.33 | 34.23 | 33.23 | 34.12 | 34.37 |
| 34.42     | 34.53 | 34.54 | 34.39 | 34.55 | 34.54 |
| 34.22     | 34.40 | 34.24 | 34.51 | 34.63 | 34.55 |
| —         | 34.40 | 34.26 | 34.25 | 34.43 | 34.38 |
| —         | 34.23 | 34.26 | 34.24 | 34.23 | 34.33 |
| 34.22     | —     | —     | —     | —     | —     |
| —         | —     | —     | —     | —     | —     |
| —         | 20    | 16    | 16    | 18    | 17    |
| —         | —     | —     | —     | —     | —     |
| —         | —     | 4     | 3     | 3     | 1     |
| —         | —     | 2     | 3     | 2     | 1     |
| 21.3      | 21.1  | 20.8  | 21.5  | 20.6  | 18.8  |
| —         | —     | —     | —     | —     | —     |
| W. 3      | W. 3  | NW. 5 | NW. 4 | NW. 3 | —     |
| Cu. 7     | Cu. 3 | Cc. 3 | Cu. 9 | —     | —     |
| C         | C     | BC    | BC    | B     | B     |

# 동해 해양관측 성적 (10월)

## Oceanographic Data, East Coast (October)

| Line           |       | 001     |       |       |       |       |
|----------------|-------|---------|-------|-------|-------|-------|
| Date           |       | October |       |       |       |       |
| Sto. No.       |       | 01      | 02    | 03    | 04    | 05    |
| Day            |       | 5       | 5     | 5     | 5     | 5     |
| Item           | Time  | 0930    | 1050  | 1215  | 1335  | 1455  |
|                | Z(m)  |         |       |       |       |       |
| T              | 0     | 19.50   | 19.20 | 19.00 | 19.10 | 18.70 |
|                | 10    | 19.62   | 18.72 | 19.15 | 19.11 | 18.87 |
|                | 20    | 17.23   | 19.12 | 19.52 | 19.31 | 18.69 |
|                | 30    | 13.96   | 14.10 | 15.98 | 18.70 | 15.84 |
|                | 50    | 5.93    | 7.88  | 2.42  | 6.54  | 7.06  |
| ℃              | 75    | 3.09    | 2.97  | 3.56  | 2.84  | 3.18  |
|                | 100   | 1.81    | 2.18  | 1.96  | 2.24  | 1.99  |
|                | 150   | —       | 1.29  | 1.38  | 1.44  | 1.71  |
|                | 200   | —       | 0.85  | 1.06  | 1.13  | 1.15  |
|                | Botm. | 1.29    | —     | —     | —     | —     |
| S              | 0     | 33.24   | 33.10 | 33.65 | 33.72 | 33.73 |
|                | 10    | 33.26   | 33.19 | 33.59 | 33.71 | 33.58 |
|                | 20    | 33.52   | 33.52 | 33.37 | 33.54 | 33.58 |
|                | 30    | 33.96   | 34.29 | 34.09 | 33.82 | 33.80 |
|                | 50    | 34.33   | 34.40 | 34.26 | 34.12 | 34.17 |
| ‰              | 75    | —       | —     | —     | —     | —     |
|                | 100   | —       | —     | —     | —     | —     |
|                | 150   | —       | —     | —     | —     | —     |
|                | 200   | —       | —     | —     | —     | —     |
|                | Botm. | —       | —     | —     | —     | —     |
| Depth (m)      |       | —       | —     | —     | —     | —     |
| Secchi (m)     |       | 14      | 14    | 16    | 16    | 18    |
| Color          |       | —       | —     | —     | —     | —     |
| Sea            |       | 4       | 3     | 4     | 4     | 4     |
| Swell          |       | 2       | 2     | 2     | 3     |       |
| Air Temp. (°C) |       | 20.5    | 19.0  | 18.6  | 18.6  | 18.9  |
| Baro. (mm)     |       | —       | —     | —     | —     | —     |
| Wind           |       | NE. 4   | NE. 4 | NE. 5 | NE. 5 | NE. 5 |
| Cloud          |       | Cu. 8   | Cc. 7 | Cu. 7 | Cu. 7 | Cu. 7 |
| Weather        |       | C       | C     | C     | C     | C     |





영 일 만 해 양 조 사 성 적

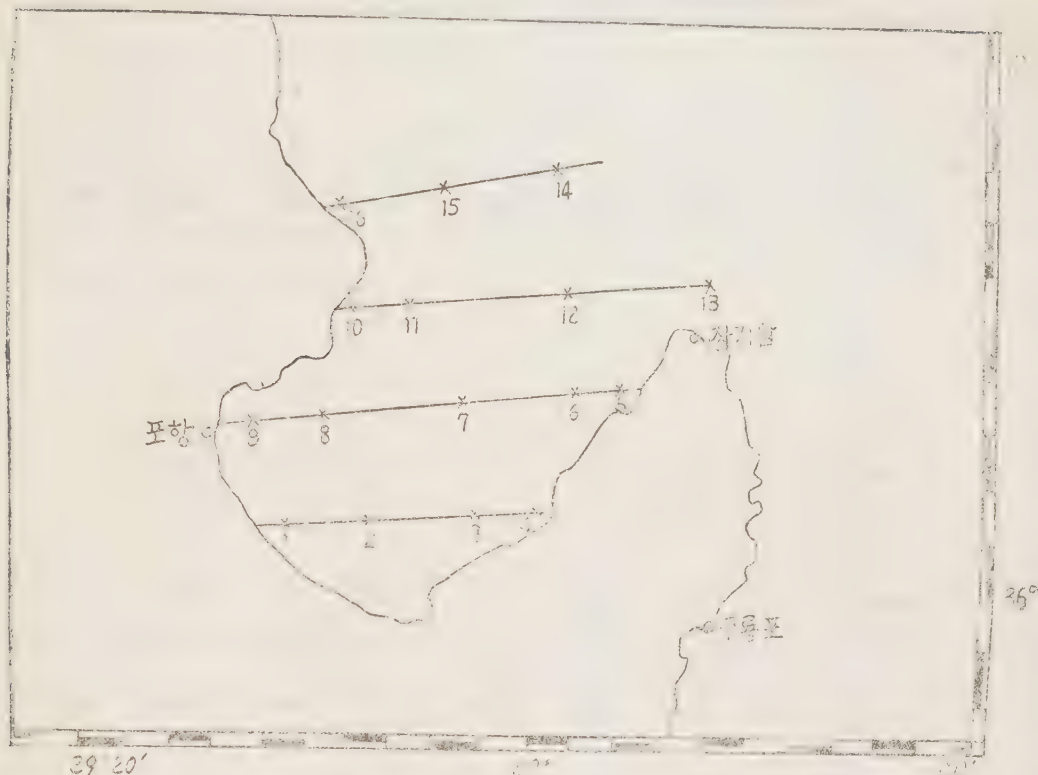
OCEANOGRAPHIC OBSERVATIONS

YOUNGIL MAN

1 9 6 5



# 영일만 해양관측점 위치도(7월) Station Locations, Youngil Man(July)



## 영일만 해양관측점 위치표(7월) Station Positions, Youngil Man (July)

| Sta. No. |       | 1          | 2          | 3          | 4          | 5          | 6          |
|----------|-------|------------|------------|------------|------------|------------|------------|
| 위<br>치   | Lat.  | 36°01'00"  | 36°01'13"  | 36°01'25"  | 36°01'31"  | 36°03'43"  | 36°03'33"  |
|          | Long. | 129°24'14" | 129°26'15" | 129°28'35" | 129°30'05" | 129°31'47" | 129°30'44" |
| Sta. No. |       | 7          | 8          | 9          | 10         | 11         |            |
| 위<br>치   | Lat.  | 36°03'20"  | 36°03'07"  | 36°02'55"  | 36°05'04"  | 36°03'17"  | 36°01'26"  |
|          | Long. | 129°26'25" | 129°26'05" | 129°23'42" | 129°25'50" | 129°28'10" | 129°30'30" |
| Sta. No. |       | 13         | 14         | 15         | 16         |            |            |
| 위<br>치   | Lat.  | 36°05'44"  | 36°07'45"  | 36°07'12"  | 36°06'59"  |            |            |
|          | Long. | 129°32'50" | 129°30'18" | 129°27'55" | 129°25'36" |            |            |



영일만 해양관측 성적(7월)  
Oceanographic Data, Youngil Man (July)

| Date           |              | ① July |       |       |       |       |       |       |       |
|----------------|--------------|--------|-------|-------|-------|-------|-------|-------|-------|
| Sta. No.       |              | 1      | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
| Day            |              | 3      | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| Item           | Time<br>Z(m) | 1230   | 1242  | 1304  | 1317  | 1340  | 1356  | 1420  | 1437  |
| T<br>°C        | 0            | 17.6   | 17.8  | 17.6  | 16.0  | 15.1  | 16.5  | 17.7  | 17.9  |
|                | 10           | —      | —     | 11.8  | 11.3  | 11.7  | 11.0  | 11.6  | 12.3  |
|                | 20           | —      | —     | —     | —     | 7.9   | 8.0   | 8.1   | —     |
|                | Botm.        | 13.0   | 10.3  | 9.5   | 10.3  | 9.3   | 7.5   | 7.4   | 8.7   |
| S<br>‰         | 0            | 34.85  | 34.67 | 34.81 | 34.59 | —     | 34.46 | 33.97 | 34.48 |
|                | 10           | —      | —     | 34.67 | 34.52 | —     | 34.43 | 34.49 | 34.37 |
|                | 30           | —      | —     | —     | —     | 34.31 | 34.60 | 34.46 | —     |
|                | Botm.        | 34.61  | 34.75 | 34.62 | 34.48 | 34.36 | 34.48 | 34.54 | 34.33 |
| Depth (m)      |              | 6      | 15    | 19    | 17    | 29    | 26    | 25    | 21    |
| Secchi (m)     |              | 5      | 5     | 5     | 4     | 5     | 4     | 5     | 6     |
| Color          |              | —      | —     | —     | —     | —     | —     | —     | —     |
| Sea            |              | 1      | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Swell          |              | 1      | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |              | 25.9   | 25.5  | 25.7  | 25.4  | 25.0  | 25.0  | 24.2  | 23.1  |
| Baro. (mm)     |              | 762    | 763   | 763   | 763   | 762   | 761   | 761   | 759   |
| Wind           |              | S. 2   | S. 3  | S. 3  | S. 4  | S. 4  | S. 5  | S. 5  | S. 4  |
| Cloud          |              | St. 4  | Cs. 6 | Cs. 8 | St. 8 | Cs. 8 | St. 9 | Cs. 7 | Cs. 2 |
| Weather        |              | BC     | BC    | BC    | C     | C     | C     | BC    | B     |

## July

| 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| 1458  | 1522  | 1545  | 1558  | 1416  | 1640  | 1656  | 1713  |
| 18.4  | 17.7  | 18.0  | 17.5  | 16.6  | 16.5  | 16.6  | 17.0  |
| —     | 14.4  | 13.0  | 12.2  | 11.0  | 10.7  | 11.3  | —     |
| —     | —     | —     | 9.7   | 9.3   | 8.6   | —     | —     |
| 12.5  | 10.8  | 7.3   | 7.2   | 6.5   | 7.8   | 9.5   | 11.7  |
| 34.60 | 34.41 | 34.57 | 34.62 | 34.46 | 34.29 | 34.54 | 34.48 |
| —     | 34.57 | 34.44 | 34.35 | 34.25 | 34.20 | 34.57 | —     |
| —     | —     | —     | 34.23 | 34.30 | 34.20 | 34.41 | —     |
| 34.46 | 34.43 | 34.48 | 34.23 | 34.26 | 34.34 | 34.43 | 34.43 |
| 10    | 13    | 23    | 26    | 30    | 33    | 22    | 14    |
| 4     | 5     | 6     | 5     | 5     | 5     | 5     | 6     |
| —     | —     | —     | —     | —     | —     | —     | —     |
| 3     | 3     | 3     | 3     | 3     | 4     | 4     | 5     |
| 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     |
| 23.0  | 23.0  | 23.8  | 2.0   | 21.7  | 21.7  | 21.5  | 21.5  |
| 761   | 61    | 760   | 760   | 760   | 760   | 760   | 760   |
| S. 3  | S. 3  | S. 3  | S. 4  | S. 4  | S. 5  | S. 5  | S. 5  |
| Cc. 8 | Cc. 8 | St. 8 | Cs. 7 | Cu. 7 | St. 8 | St. 8 | St. 8 |
| C     | C     | Cs    | BC    | BC    | C     | C     | C     |

| Date           |              | ② July |      |      |      |      |      |      |
|----------------|--------------|--------|------|------|------|------|------|------|
| Sta. No.       |              | 1      | 2    | 3    | 4    | 5    | 6    | 7    |
| Day            |              | 13     | 13   | 13   | 13   | 13   | 13   | 13   |
| Item           | Time<br>Z(m) | 1145   | 1127 | 1108 | 1050 | 1037 | 1018 | 0958 |
| T<br>°C        | 0            | 18.0   | 18.8 | 19.5 | 19.9 | 19.7 | 19.0 | 19.2 |
|                | 10           | —      | —    | 15.9 | —    | 15.5 | 15.8 | 15.9 |
|                | 25           | —      | —    | —    | —    | —    | —    | —    |
|                | Botm         | 16.1   | 14.4 | 13.3 | 15.0 | 12.8 | 11.8 | 13.4 |
| S<br>‰         | 0            | —      | —    | —    | —    | —    | —    | —    |
|                | 10           | —      | —    | —    | —    | —    | —    | —    |
|                | 25           | —      | —    | —    | —    | —    | —    | —    |
|                | Botm         | —      | —    | —    | —    | —    | —    | —    |
| Depth (m)      |              | 6      | 15   | 23   | 18   | 23   | 27   | 23   |
| Secchi (m)     |              | —      | —    | —    | 2    | 2    | 3    | 3    |
| Color          |              | —      | —    | —    | —    | —    | —    | —    |
| Sea            |              | 2      | 2    | 2    | 2    | 2    | 3    | 2    |
| Swell          |              | 2      | 2    | 2    | 1    | 1    | 1    | 1    |
| Air Temp. (°C) |              | 20.4   | 20.2 | 20.3 | 22.8 | 20.5 | 20.0 | 19.0 |
| Baro. (mm)     |              | 764    | 764  | 764  | 763  | 762  | 762  | 763  |
| Wind           |              | SE 2   | SE 2 | SE 2 | SE 2 | SE 2 | SE 4 | SE 3 |
| Cloud          |              | St 7   | St 6 | St 7 | St 7 | St 7 | St 8 | St 8 |
| Weather        |              | BC     | BC   | BC   | BC   | BC   | C    | C    |

| July  |       |         |       |       |       |       |       |       |
|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| 8     | 9     | 10      | 11    | 12    | 13    | 14    | 15    | 16    |
| 13    | 13    | 13      | 13    | 13    | 13    | 13    | 13    | 13    |
| 0938  | 0915  | 0844    | 0823  | 0803  | 0740  | 0718  | 0700  | 0635  |
| 17.8  | 18.1  | 18.3    | 19.1  | 17.5  | 18.8  | 16.7  | 16.1  | 16.7  |
| 15.7  | —     | 15.8    | 15.6  | 15.0  | 16.1  | 15.7  | 15.4  | 15.6  |
| —     | —     | —       | —     | —     | 14.8  | 14.0  | —     | —     |
| 12.9  | 15.0  | 14.9    | 14.3  | 13.6  | 13.0  | 13.0  | 14.1  | 14.5  |
| —     | —     | —       | —     | —     | —     | —     | —     | —     |
| —     | —     | —       | —     | —     | —     | —     | —     | —     |
| —     | —     | —       | —     | —     | —     | —     | —     | —     |
| —     | —     | —       | —     | —     | —     | —     | —     | —     |
| 23    | 14    | 17      | 24    | 26    | 35    | 38    | 24    | 15    |
|       | 3     | 3       | 4     | 4     | 4     | 4     | 4     | 3     |
| —     | —     | —       | —     | —     | —     | —     | —     | —     |
| 2     | 2     | 3       | 3     | 3     | 3     | 4     | 3     | 2     |
| 1     | 1     | 1       | 1     | 1     | 2     | 2     | 1     | 1     |
| 19.1  | 21.0  | 19.5    | 19.5  | 19.3  | 19.5  | 19.7  | 19.5  | 20.0  |
| 762   | 763   | 762     | 763   | 763   | 763   | 763   | 763   | 763   |
| SE. 3 | SE. 2 | SE. 3   | SE. 2 | SE. 2 | SE. 4 | S. 3  | S. 3  | S. 3  |
| St. 9 | St. 8 | CiSc. 8 | St. 8 | Cs. 7 | St. 7 | Cc. 8 | Cc. 8 | St. 5 |
| C     | C     | C       | C     | BC    | BC    | C     | C     | C     |



남 동 해 역 해 양 조 사 성 적

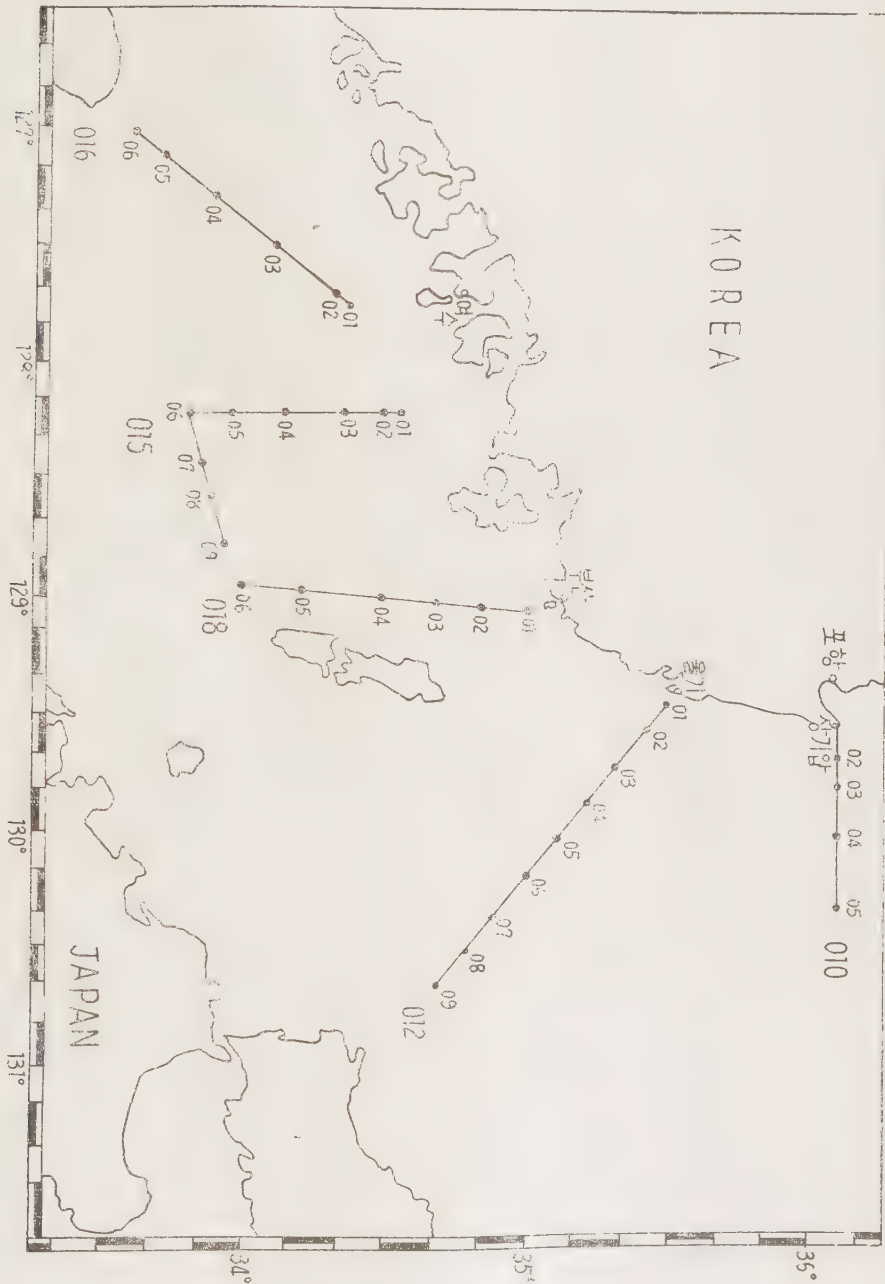
OCEANOGRAPHIC OBSERVATIONS  
SOUTHEAST COAST

1 9 6 5



# 남동해역 해양관측점 위치도(1~9)

Station Locations, Southeast Coast (Jan. ~Sept.)





# 남동해역 해양관측점 위치표(1~9월)

Station Positions, Southeast Coast (Jan. Sept )

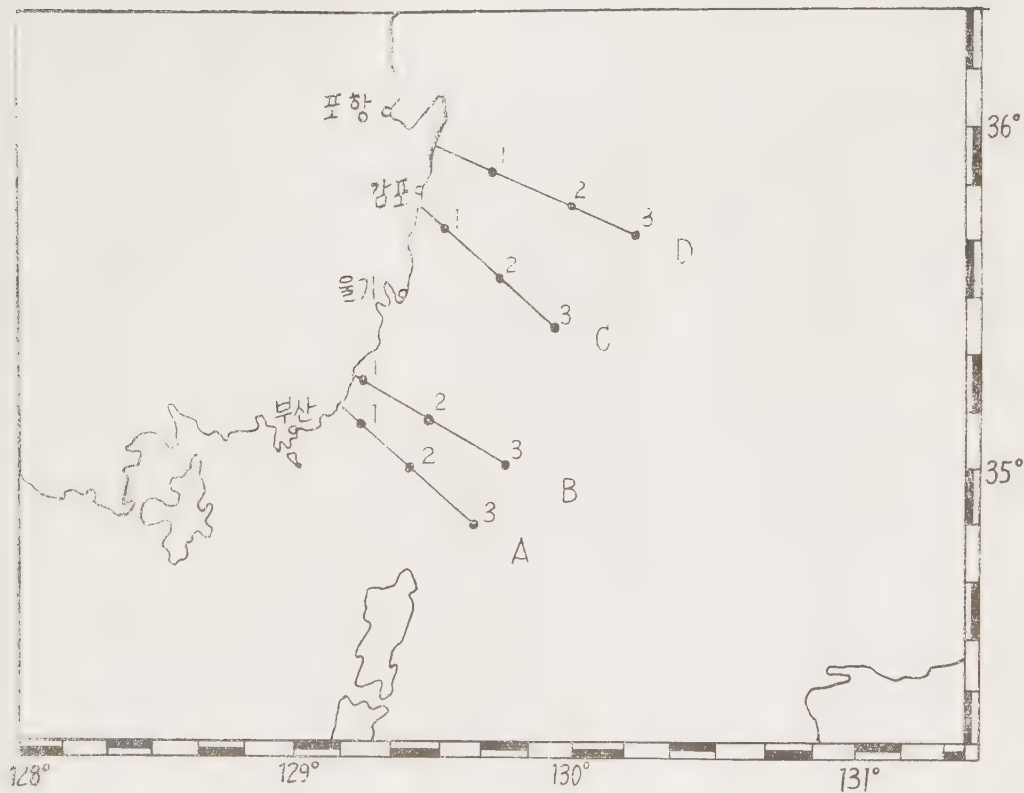
| Line<br>Sta. No. | 010                     | 012                     | 015                     | 016                     | 018                     |
|------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 01               |                         | 35°29'10"<br>129°27'26" | 34°33'10"<br>128°13'45" | 34°21'55"<br>127°46'25" | 34°58'00"<br>129°05'02" |
| 02               | 36°05'00"<br>129°42'50" | 35°24'40"<br>129°33'40" | 34°27'50"<br>128°13'50" | 34°19'00"<br>127°43'05" | 34°50'00"<br>129°04'39" |
| 03               | 36°05'00"<br>129°48'15" | 35°18'00"<br>129°43'10" | 34°20'00"<br>128°12'55" | 34°06'15"<br>127°32'03" | 34°45'00"<br>129°03'00" |
| 04               | 36°05'00"<br>130°01'00" | 35°11'40"<br>129°52'30" | 34°07'55"<br>128°13'55" | 33°54'45"<br>127°21'20" | 34°08'00"<br>129°01'05" |
| 05               | 36°05'00"<br>130°19'30" | 35°05'30"<br>130°01'30" | 33°47'55"<br>128°14'25" | 33°42'25"<br>127°10'55" | 34°13'02"<br>128°59'30" |
| 06               |                         | 34°59'00"<br>130°11'00" | 33°47'05"<br>128°14'10" | 33°35'40"<br>127°03'20" | 33°58'30"<br>128°58'12" |
| 07               |                         | 34°52'40"<br>130°20'20" | 33°40'00"<br>128°25'00" |                         |                         |
| 08               |                         | 34°46'20"<br>130°29'30" | 33°52'40"<br>128°35'10" |                         |                         |
| 09               |                         | 34°40'00"<br>130°38'40" | 33°55'45"<br>128°46'10" |                         |                         |

남동해역 해양관측성적(9월)  
Oceanographic Data, Southeast Coast, (September)

| Line           |              | 010       |       |       |       |
|----------------|--------------|-----------|-------|-------|-------|
| Date           |              | September |       |       |       |
| Sta. No.       |              | 02        | 03    | 04    | 05    |
| Day            |              | 26        | 26    | 26    | 26    |
| Item           | Time<br>Z(m) | 1950      | 1820  | 1705  | 1500  |
| T              | 0            | 22.50     | 23.00 | 23.30 | 24.00 |
|                | 10           | 22.41     | 22.54 | 23.00 | 24.46 |
|                | 20           | 22.63     | 23.58 | 22.98 | 23.78 |
|                | 30           | 20.02     | 20.46 | 22.93 | 23.63 |
|                | 50           | 14.11     | 15.34 | 18.24 | 18.61 |
|                | 75           | 10.76     | 11.38 | 13.25 | 13.93 |
| ℃              | 100          | 5.50      | 5.67  | 8.06  | 9.38  |
|                | 150          | 1.63      | 2.24  | 3.74  | 3.59  |
|                | 200          | 1.28      | 1.39  | 2.04  | 1.64  |
| Botm.          |              | —         | —     | —     | —     |
| S<br>‰         | 0            | 32.26     | 32.16 | 32.54 | 33.09 |
|                | 10           | 35.35     | 32.19 | 32.62 | 33.09 |
|                | 20           | 32.76     | 32.64 | 32.55 | 33.43 |
|                | 30           | 32.48     | 33.15 | 32.54 | 33.42 |
|                | 50           | 33.05     | 34.16 | 34.42 | 34.37 |
|                | 70           | 34.49     | 34.52 | 34.45 | 34.50 |
|                | 100          | 34.32     | 34.34 | 34.35 | 34.27 |
|                | 150          | 34.34     | 34.24 | 34.31 | 34.26 |
|                | 200          | 34.25     | 34.20 | 34.27 | 33.61 |
| Botm.          |              | —         | —     | —     | —     |
| Depth (m)      |              | —         | —     | —     | —     |
| Secchi (m)     |              | —         | —     | —     | 17    |
| Color          |              | —         | —     | —     | —     |
| Sea            |              | 3         | 4     | 3     | 3     |
| Swell          |              | 2         | 3     | 2     | 2     |
| Air Temp. (°C) |              | 18.0      | 22.5  | 22.3  | 23.5  |
| Baro. (mm)     |              | —         | —     | —     | —     |
| Wind           |              | S. 3      | S. 5  | S. 4  | S. 3  |
| Cloud          |              | —         | —     | —     | —     |
| Weather        |              | B         | B     | B     | B     |

# 남동해역 해양관측점 위치도(3~10월)

Station Locations, Southeast Coast(Mar. ~Oct.)



## 남동해역 해양관측점 위치표(3~10월)

Station Positions, Southeast Coast(Mar. ~Oct.)

| Line    | A                           | B                           | C                           | D                           |
|---------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Sta. No |                             |                             |                             |                             |
| 1       | 35° 06' 10"<br>129° 16' 15" | 35° 15' 30"<br>129° 12' 45" | 35° 42' 00"<br>129° 33' 10" | 35° 51' 30"<br>129° 43' 30" |
| 2       | 35° 00' 00"<br>129° 25' 55" | 35° 09' 50"<br>129° 32' 00" | 35° 33' 00"<br>129° 42' 45" | 35° 48' 50"<br>130° 02' 00" |
| 3       | 34° 51' 05"<br>129° 40' 30" | 35° 00' 45"<br>129° 45' 55" | 35° 23' 45"<br>129° 56' 45" | 32° 42' 30"<br>130° 13' 55" |

남동해역 해양관측성적(3~4월)  
Oceanographic Data, Southeast Coast (Mar. ~Apr.)

| Line           |      | A       |        |        |        |        |       |       |       |       |       |
|----------------|------|---------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| Date           |      | ① March |        |        |        |        |       |       |       |       |       |
| Sta. No.       |      | 01      | 02     | 03     | 04     | 05     | 06    | 07    | 08    | 09    | 10    |
| Day            |      | 27      | 27     | 27     | 27     | 27     | 28    | 28    | 28    | 28    | 28    |
| Item           | Time | 0905    | 0943   |        | 1210   | 1325   | 0745  | 0845  | 0905  | 0915  | 1050  |
|                | Z(m) |         |        |        |        |        |       |       |       |       |       |
| T              | 0    | 14.2    | 14.0   | 13.9   | 14.3   | 14.7   | 14.4  | 15.1  | 14.1  | 14.3  | 14.2  |
|                | 10   | 14.1    | 14.0   | 13.9   | 14.3   | 14.7   | —     | —     | —     | —     | —     |
|                | 25   | 14.0    | 13.9   | 13.9   | 14.2   | 14.7   | —     | —     | —     | —     | —     |
|                | 50   | 13.9    | 13.9   | 13.9   | 14.2   | 14.7   | —     | —     | —     | —     | —     |
|                | 70   | 13.0    | 13.9   | 13.8   | 14.1   | 14.3   | —     | —     | —     | —     | —     |
| Botm.          |      | —       | —      | —      | —      | —      | —     | —     | —     | —     | —     |
| S              | 0    | 34.76   | 34.87  | 34.87  | 34.87  | 34.92  | 34.69 | 34.74 | 34.83 | 34.83 | 34.83 |
|                | 10   | 34.76   | 34.87  | 34.85  | 34.83  | 34.92  | —     | —     | —     | —     | —     |
|                | 25   | 34.76   | 34.79  | 34.81  | 34.79  | 34.92  | —     | —     | —     | —     | —     |
|                | 50   | 34.76   | 34.76  | 34.78  | 34.76  | 34.92  | —     | —     | —     | —     | —     |
|                | 70   | 34.74   | 34.74  | 34.72  | 34.74  | 34.90  | —     | —     | —     | —     | —     |
| Botm.          |      | —       | —      | —      | —      | —      | —     | —     | —     | —     | —     |
| Depth(m)       |      | 84      | 111    | —      | —      | —      | 75    | 104   | 104   | —     | —     |
| Secchi(m)      |      | 15      | 14.5   | 13.5   | 19     | 20     | —     | —     | —     | —     | —     |
| Color          |      | —       | —      | —      | —      | —      | —     | —     | —     | —     | —     |
| Sea            |      | 1       | 1      | 2      | 2      | 2      | 1     | 1     | —     | 1     | 2     |
| Swell          |      | 1       | 1      | 2      | 2      | 2      | 1     | 1     | —     | 1     | 2     |
| Air Temp. (°C) |      | 9.4     | 11.5   | 11.7   | 11.9   | 12.2   | 14.7  | 10.0  | 9.1   | 9.2   | 6.5   |
| Baro. (mm)     |      | 769     | 769    | 769    | 768    | 768    | 769   | 769   | —     | 770   | 769   |
| Wind           |      | SSE. 1  | SSE. 1 | SSE. 1 | SSE. 1 | SSE. 2 | NW. 2 | NW. 2 | NW. 2 | NW. 2 | N. 2  |
| Cloud          |      | 0       | 0      | 0      | 0      | 0      | Ci. 4 | Ci. 4 | Ci. 4 | Cu. 4 | Cu. 3 |
| Weather        |      | B       | B      | B      | B      | B      | Bc    | Bc    | Bc    | Bc    | Bc    |

| Line           |              | A      |        | B       |       |       |       |       |       |      |      |
|----------------|--------------|--------|--------|---------|-------|-------|-------|-------|-------|------|------|
| Date           |              |        |        | ② March |       |       |       |       |       |      |      |
| Sta. No.       |              | 11     | 12     | 01      | 02    | 03    | 04    | 05    | 06    | 07   | 08   |
| Day            |              | 28     | 28     | 29      | 29    | 29    | 29    | 29    | 29    | 30   | 30   |
| Item           | Time<br>Z(m) |        |        | 0815    | 0850  | 0945  | 1100  | 1215  | 1610  | 0830 | 0920 |
| T<br>°C        | 0            | 14.0   | 14.2   | 13.6    | 13.7  | 13.6  | 13.5  | 13.6  | 13.5  | 13.5 | —    |
|                | 10           | —      | —      | 13.6    | 13.7  | 13.6  | 13.5  | 13.5  | —     | —    | —    |
|                | 25           | —      | —      | 13.6    | 13.6  | 13.5  | 13.4  | 13.5  | —     | —    | —    |
|                | 50           | —      | —      | —       | 13.6  | 13.5  | 13.4  | 13.4  | —     | —    | —    |
|                | 70           | —      | —      | —       | 13.5  | 13.4  | 13.4  | 13.4  | —     | —    | —    |
|                | Botm.        | —      | —      | 13.6    | —     | —     | —     | —     | —     | —    | —    |
| S<br>‰         | 0            | 34.83  | 34.83  | 34.78   | 34.78 | 34.76 | 34.76 | 34.76 | —     | —    | —    |
|                | 10           | —      | —      | 34.76   | 34.78 | 34.76 | 34.76 | 34.76 | —     | —    | —    |
|                | 25           | —      | —      | 34.74   | 34.76 | 34.76 | 34.76 | 34.76 | —     | —    | —    |
|                | 30           | —      | —      | 34.72   | —     | —     | —     | —     | —     | —    | —    |
|                | 50           | —      | —      | —       | 34.76 | 34.74 | 34.74 | 34.74 | —     | —    | —    |
|                | 70           | —      | —      | —       | 34.76 | 34.74 | 34.74 | 34.74 | —     | —    | —    |
|                | Botm.        | —      | —      | —       | —     | —     | —     | —     | —     | —    | —    |
| Depth (m)      |              | —      | 42     | 47      | 106   | 93    | 106   | 100   | 56    | 45   | 72   |
| Secchi (m)     |              | —      | —      | 18      | 20    | 18    | 20    | 18    | —     | —    | —    |
| Color          |              | —      | —      | —       | —     | —     | —     | —     | —     | —    | —    |
| Sea            |              | 1      | .1     | 1       | 1     | 1     | 1     | 1     | 1     | 0.5  | 1    |
| Swell          |              | 2      | 2      | 1       | 1     | 1     | 1     | 1     | 1     | 1    | 1    |
| Air Temp. (°C) |              | 11.5   | 8.5    | 10.2    | 9.6   | 9.7   | 11.6  | 10.3  | 11.0  | 9.2  | 11.8 |
| Baro. (mm)     |              | 769    | 769    | 769     | 769   | 769   | 769   | 768   | 769   | 767  | 767  |
| Wind           |              | NNW. 2 | NNW. 2 | NW. 1   | NW. 2 | NW. 2 | NW. 1 | NW. 2 | NW. 1 | N. 1 | N. 1 |
| Cloud          |              | Cu. 1  | Cu. 5  | As. 9   | As. 9 | As. 8 | As. 9 | As. 8 | As. 6 | 0    | 0    |
| Wcather        |              | B      | B      | C       | C     | C     | C     | C     | Bc    | B    | B    |

| D     |       |       |       |       |        |       |       |
|-------|-------|-------|-------|-------|--------|-------|-------|
| March |       |       |       |       |        |       |       |
| 01    | 02    | 03    | 04    | 05    | 06     | 07    | 08    |
| 30    | 30    | 30    | 30    | 30    | 31     | 31    | 31    |
| 1045  | 1115  | 1215  | 1325  | 1440  | 0902   | 0935  | 1052  |
| 13.4  | 13.5  | 13.4  | 13.4  | 13.5  | 13.5   | 13.4  | 13.3  |
| 13.4  | 13.4  | 13.3  | 13.2  | 13.2  | —      | —     | —     |
| 13.4  | 13.4  | 13.2  | 13.2  | 13.2  | —      | —     | —     |
| —     | 13.4  | 13.2  | 13.2  | 13.0  | —      | —     | —     |
| —     | 13.3  | 13.2  | 13.1  | 13.0  | —      | —     | —     |
| —     | —     | —     | —     | —     | —      | —     | —     |
| 34.81 | 34.81 | 34.81 | 34.85 | 34.83 | —      | —     | —     |
| 34.78 | 34.79 | 34.79 | 34.83 | 34.81 | —      | —     | —     |
| 34.76 | 34.78 | 34.78 | 34.81 | 34.79 | —      | —     | —     |
| —     | —     | —     | —     | —     | —      | —     | —     |
| —     | 34.76 | 34.76 | 34.81 | 34.78 | —      | —     | —     |
| —     | 34.76 | 34.76 | 34.78 | 34.76 | —      | —     | —     |
| —     | —     | —     | —     | —     | —      | —     | —     |
| 29    | 110   | 130   | —     | —     | —      | —     | 36    |
| —     | 18    | 18    | 18    | 19.5  | —      | —     | —     |
| —     | —     | —     | —     | —     | —      | —     | —     |
| 1     | 1     | 1     | 1     | 1     | 0      | 1     | 1     |
| 1     | 1     | 1     | 1     | 1     | 0      | 1     | 1     |
| 11.4  | 11.9  | 10.6  | 11.4  | 13.8  | 11.1   | 12.7  | 14.8  |
| 757   | 766   | 766   | 765   | 765   | 761    | 760   | —     |
| N. 1  | NW. 1 | NW. 1 | NW. 1 | NW. 1 | W. 1   | W. 1  | N. 1  |
| 0     | 0     | —     | 0     | 0     | Sc. 10 | Sc. 9 | Sc. 9 |
| B     | B     | B     | B     | B     | C      | C     | C     |

| Line           |      | D     |       |       |       |       |       |       |       |       |       |       |       |
|----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Date           |      | April |       |       |       |       |       |       |       |       |       |       |       |
| Sta. No.       |      | 01    | 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09    | 10    | 11    | 12    |
| Day            |      | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 2     | 3     | 3     | 3     | 3     |
| Item           | Time |       |       |       |       |       |       |       |       |       |       |       |       |
|                | Z(m) | 1315  | 1410  | 1450  | 1610  | 1725  | 1845  | 1945  | 2045  | 0820  | 0925  | 1000  | 1110  |
| T<br>°C        | 0    | 13.8  | 14.8  | 14.8  | 15.0  | 15.2  | 14.9  | 14.7  | 14.5  | 14.3  | 14.3  | 14.4  | 14.7  |
|                | 10   | 13.7  | 14.5  | 14.6  | 14.8  | 15.0  | —     | —     | —     | —     | —     | —     | —     |
|                | 25   | 13.7  | 14.4  | 14.5  | 14.7  | 15.0  | —     | —     | —     | —     | —     | —     | —     |
|                | 50   | 13.7  | 13.7  | 14.4  | 14.6  | 14.8  | —     | —     | —     | —     | —     | —     | —     |
|                | 70   | —     | 13.7  | 14.1  | 14.6  | 14.7  | —     | —     | —     | —     | —     | —     | —     |
| Botm.          |      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
| S<br>‰         | 0    | 34.76 | 34.78 | 34.79 | 34.76 | 34.76 | 34.76 | 34.87 | 34.90 | 34.96 | 34.96 | 34.92 | 34.92 |
|                | 10   | 23.76 | 34.76 | 34.78 | 34.76 | 34.78 | —     | —     | —     | —     | —     | —     | —     |
|                | 25   | 34.74 | 34.76 | 34.76 | 34.76 | 34.78 | —     | —     | —     | —     | —     | —     | —     |
|                | 50   | 34.74 | 34.74 | 34.76 | 34.76 | 34.79 | —     | —     | —     | —     | —     | —     | —     |
|                | 70   | —     | 34.74 | 34.76 | 34.76 | 34.79 | —     | —     | —     | —     | —     | —     | —     |
| Botm.          |      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
| Depth (m)      |      | 43    | 118   | 120   | 127   | 120   | 124   | 110   | 105   | 68    | —     | —     | 64    |
| Secchi (m)     |      | 19    | 18    | 18    | 18    | 18    | —     | —     | —     | —     | —     | —     | —     |
| Color          |      | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     | —     |
| Sea            |      | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 0.5   | 1     | 1     | 1     | 0.5   |
| Swell          |      | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Air Temp. (°C) |      | 11.7  | 10.3  | 10.7  | 12.0  | 11.2  | 10.5  | 9.6   | 101   | 11.9  | 12.4  | 12.7  | 13.6  |
| Baro. (mm)     |      | 766   | 765   | 765   | 765   | 765   | 765   | 765   | 765   | 767   | 767   | 767   | 766   |
| Wind           |      | NE.1  | NE.1  | E.1   | E.1   | E.1   | S.1   | S.1   | S.1   | W.1   | NW.1  | NW.1  | SW.1  |
| Cloud          |      | 1     | 1     | 0     | 1     | 1     | 3     | 4     | 0     | 0     | 0     | 2     | 0     |
| Weather        |      | B     | B     | B     | B     | B     | BC    | BC    | B     | B     | B     | B     | B     |

남동해역 해양관측성적(4~5월)  
Oceanographic Data, Southeast Coast(Apr. ~May)

| Line           |              | A       |        |       |       |       |        |        |        |
|----------------|--------------|---------|--------|-------|-------|-------|--------|--------|--------|
| Date           |              | ② April |        |       |       |       |        |        |        |
| Sta. No.       |              | 01      | 02     | 03    | 04    | 05    | 06     | 07     | 08     |
| Day            |              | 24      | 24     | 24    | 24    | 24    | 25     | 25     | 25     |
| Item           | Time<br>Z(m) | 0735    | 0825   | 0920  | 1035  | 1150  |        | 0905   | 1000   |
| T<br><br>°C    | 0            | 15.50   | 15.60  | 16.20 | 16.30 | 16.50 | 16.00  | 16.40  | 16.30  |
|                | 10           | 15.70   | 16.40  | 16.10 | 16.20 | 16.60 | —      | —      | —      |
|                | 25           | 15.50   | 16.00  | 15.90 | 16.30 | 16.50 | —      | —      | —      |
|                | 50           | 15.00   | 15.80  | 15.00 | 15.90 | 16.00 | —      | —      | —      |
|                | 70           | 14.60   | 15.40  | 14.40 | 15.50 | 15.50 | —      | —      | —      |
|                | Botm.        | —       | —      | —     | —     | —     | —      | —      | —      |
| S<br><br>‰     | 0            | 34.16   | 34.60  | 34.54 | 34.51 | 34.49 | 34.52  | 34.42  | 34.40  |
|                | 10           | 34.24   | 34.60  | 34.56 | 34.54 | 34.56 | —      | —      | —      |
|                | 25           | 34.36   | 34.60  | 34.56 | 34.56 | 34.61 | —      | —      | —      |
|                | 50           | 34.56   | 34.60  | 34.58 | 34.60 | 34.51 | —      | —      | —      |
|                | 70           | —       | —      | —     | —     | —     | —      | —      | —      |
|                | Botm.        | —       | —      | —     | —     | —     | —      | —      | —      |
| Depth (m)      |              | 83      | 110    | 115   | 109   | 98    | 75     | 105    | 105    |
| Secchi (m)     |              | 10      | 12     | 11    | 12    | —     | —      | —      | —      |
| Color          |              | —       | —      | —     | —     | —     | —      | —      | —      |
| Sea            |              | 3       | 2      | 3     | 3     | 3     | 2      | 2      | 2      |
| Swell          |              | 1       | 1      | 1     | 1     | 1     | 1      | 1      | 1      |
| Air Temp. (°C) |              | 15.5    | 17.0   | 17    | 16.7  | 16.2  | 16.2   | 17.5   | 18.0   |
| Baro. (mm)     |              | 760     | 760    | 760   | 761   | 762   | 760.5  | 761    | 761    |
| Wind           |              | NW. 1   | NNE. 1 | NE. 2 | NE. 3 | NE. 4 | NE. 2  | NE. 3  | ENE. 4 |
| Cloud          |              | Ci. 2   | Ci. 2  | Ci. 3 | Ci. 5 | Cs. 7 | As. 10 | As. 10 | As. 10 |
| Weather        |              | B       | B      | BC    | BC    | BC    | C      | C      | C      |





| B      |        |        | C     |       |       |       |       |
|--------|--------|--------|-------|-------|-------|-------|-------|
| April  |        |        | April |       |       |       |       |
| 06     | 07     | 08     | 01    | 02    | 03    | 04    | 05    |
| 27     | 27     | 27     | 30    | 30    | 30    | 30    | 30    |
| 0645   | 0955   | 1200   | 0605  | 0640  | 0730  | 0845  | 1000  |
| 15.00  | 14.90  | 15.00  | 14.70 | 14.90 | 15.10 | 15.00 | 14.80 |
| —      | —      | —      | 14.70 | 15.00 | 15.10 | 15.20 | 14.20 |
| —      | —      | —      | 14.70 | 15.00 | 15.10 | 15.00 | 14.20 |
| —      | —      | —      | 14.60 | 14.90 | 14.70 | 14.20 | 14.30 |
| —      | —      | —      | —     | 14.70 | 14.50 | 14.10 | 14.20 |
| —      | —      | —      | —     | —     | —     | —     | —     |
| 34.61  | 34.63  | 34.65  | 34.66 | 34.65 | 34.60 | 34.60 | 34.76 |
| —      | —      | —      | —     | —     | 34.61 | 34.5  | 34.74 |
| —      | —      | —      | 34.58 | 34.65 | 34.67 | 34.61 | 34.69 |
| —      | —      | —      | 34.58 | 34.67 | 34.69 | 34.67 | 34.60 |
| —      | —      | —      | —     | 34.67 | 34.69 | 34.69 | 34.61 |
| —      | —      | —      | —     | —     | —     | —     | —     |
| 55     | 90     | 87     | 60    | 110   | 125   | 115   | 95    |
| —      | —      | —      | 13    | 11    | 12    | —     | 12    |
| —      | —      | —      | —     | —     | —     | —     | —     |
| 3      | 3      | 3      | 2     | 1     | 1     | 2     | 2     |
| —      | —      | —      | —     | 1     | 1     | 1     | —     |
| 12.0   | 14.20  | 14.3   | 7.82  | 11.0  | 11.5  | 11.7  | 11.5  |
| 760    | 761    | 761    | 760   | 760   | 760   | 760   | 760   |
| NNW. 2 | NNW. 2 | N. 2   | S. 1  | S. 1  | NW. 1 | NW. 1 | NW. 1 |
| As. 7  | Cs. 8  | As. 10 | 0     | 0     | 0     | 0     | 0     |
| BC     | C      | C      | B     | B     | B     | B     | B     |

| Line           |       | C         |       |       |        | D     |       |       |       |       |
|----------------|-------|-----------|-------|-------|--------|-------|-------|-------|-------|-------|
| Date           |       | April~May |       |       |        | May   |       |       |       |       |
| Sta. No.       |       | 06        | 07    | 08    | 09     | 01    | 02    | 03    | 04    | 05    |
| Day            |       | 30        | 30    | 30    | 1      | 1     | 1     | 1     | 1     | 1     |
| Item           | Time  | 1850      | 1900  | 2038  | 0545   | 0613  | 0753  | 0835  | 0950  | 1105  |
|                | Z(m)  |           |       |       |        |       |       |       |       |       |
| T<br>°C        | 0     | 15.50     | 15.10 | 14.50 | 14.50  | 14.30 | 14.80 | 15.50 | 16.50 | 16.90 |
|                | 10    | —         | —     | —     | —      | 14.40 | 14.50 | 14.80 | 16.50 | 16.50 |
|                | 25    | —         | —     | —     | —      | 14.40 | 14.50 | 14.80 | 16.50 | 16.50 |
|                | 50    | —         | —     | —     | —      | 14.40 | 14.20 | 14.50 | 15.50 | 15.50 |
|                | 70    | —         | —     | —     | —      | 14.30 | 14.20 | 14.50 | 15.50 | 14.90 |
|                | Botm. | —         | —     | —     | —      | —     | —     | —     | —     | —     |
| S<br>‰         | 0     | 34.94     | 34.79 | 43.60 | 34.67  | 34.67 | 34.52 | 34.52 | 34.60 | —     |
|                | 10    | —         | —     | —     | —      | 34.70 | 34.61 | 34.60 | 34.60 | 34.52 |
|                | 25    | —         | —     | —     | —      | 34.65 | 34.65 | 34.58 | 34.58 | 34.61 |
|                | 50    | —         | —     | —     | —      | 34.69 | 34.69 | 34.58 | 34.66 | 34.67 |
|                | 70    | —         | —     | —     | —      | —     | 34.67 | 34.58 | 34.56 | 34.69 |
|                | Botm. | —         | —     | —     | —      | —     | —     | —     | —     | —     |
| Depth (m)      |       | 55        | 42    | 40    | 45     | 93    | 125   | 128   | 130   | 120   |
| Secchi (m)     |       | —         | —     | —     | —      | 13    | 15    | 11    | 11    | 11    |
| Color          |       | —         | —     | —     | —      | —     | —     | —     | —     | —     |
| Sea            |       | 2         | 2     | 2     | 2      | 2     | 2     | 1     | 1     | 2     |
| Swell          |       | 1         | —     | —     | —      | —     | —     | 1     | 1     | —     |
| Air Temp. (°C) |       | 13.0      | 12.0  | 12.0  | 12.0   | 765   | 765   | 765   | 765   | 765   |
| Baro. (mm)     |       | 761       | 761   | 762   | 765    | —     | —     | —     | —     | —     |
| Wind           |       | N. 1      | N. 1  | N. 1  | S. 1   | SW. 1 | NW. 1 | NW. 1 | N. 1  | N. 1  |
| Cloud          |       | As. 5     | Ac. 2 | Ac. 5 | Sc. 10 | Ci. 2 | Ci. 3 | Ci. 3 | As. 2 | Cu. 2 |
| Weather        |       | BC        | B     | BC    | C      | B     | BC    | BC    | B     | B     |

D

May

| 06    | 07    | 08   | 09     | 10    | 11    | 12    |
|-------|-------|------|--------|-------|-------|-------|
| 1     | 1     | 1    | 2      | 2     | 2     | 2     |
| 1225  | 1340  | 1455 | 0735   | 0805  | 0845  | 1120  |
| 16.90 | 16.70 |      | 15.60  | 15.10 | 15.20 | 15.90 |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| 34.70 | —     | —    | 34.79  | 34.79 | 34.81 | 34.81 |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| 125   | 110   | 105  | —      | 35    | 55    | 50    |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | —      | —     | —     | —     |
| —     | —     | —    | 1      | —     | —     | —     |
| —     | —     | —    | 1      | —     | —     | —     |
| 765   | 765   | —    | 764    | 764   | 764   | 764   |
| —     | —     | —    | —      | —     | —     | —     |
| N. 1  | —     | —    | ENE. 1 | SE. 1 | —     | NE. 1 |
| —     | —     | —    | Sc. 10 | —     | —     | —     |
| —     | —     | —    | C      | —     | —     | —     |

남동해역 해양관측성적 (10월)  
Oceanographic Data, Southeast Coast(October)

| Line           |              | A         |        |       |       |       |        |       |
|----------------|--------------|-----------|--------|-------|-------|-------|--------|-------|
| Date           |              | ③ October |        |       |       |       |        |       |
| Sta. No.       |              | 01'       | 01     | 02    | 03    | 04    | 05     | 06    |
| Day            |              | 9         | 10     | 10    | 10    | 10    | 10     | 9     |
| Item           | Time<br>Z(m) | 1617      | 0715   | 0755  | 0850  | 1015  | 1130   | 1632  |
| T<br><br>℃     | 0            | 23.99     | 23.99  | 24.19 | 24.49 | 24.49 | 24.59  | 23.99 |
|                | 10           | —         | 23.99  | 24.29 | 24.49 | 24.49 | 24.59  | 24.49 |
|                | 20           | —         | 23.99  | 24.39 | 24.49 | 24.49 | 24.49  | —     |
|                | 30           | —         | 23.79  | 24.39 | 24.49 | 24.49 | 24.45  | —     |
|                | 50           | —         | 23.79  | 24.39 | 24.49 | 24.49 | 24.39  | —     |
|                | 75           | —         | —      | 20.68 | 19.28 | 18.98 | 24.29  | —     |
|                | 100          | —         | —      | 17.28 | 16.88 | 17.58 | 17.28  | —     |
|                | Botm.        | —         | 21.48  | —     | —     | —     | —      | 23.69 |
| S<br><br>‰     | 0            | —         | 32.72  | 33.61 | 34.36 | 34.36 | 34.18  | 33.73 |
|                | 10           | —         | 33.64  | 34.49 | —     | 34.40 | 34.36  | 33.20 |
|                | 20           | —         | 34.01  | 34.30 | —     | 34.18 | 34.15  | —     |
|                | 30           | —         | 32.82  | 34.12 | 33.60 | 34.23 | 34.31  | —     |
|                | 50           | —         | 33.69  | 34.58 | —     | 34.29 | 33.84  | —     |
|                | 75           | —         | —      | 34.12 | 34.39 | —     | 34.51  | —     |
|                | 100          | —         | —      | 34.67 | 33.56 | 34.32 | 34.47  | —     |
|                | Botm.        | —         | 33.83  | —     | —     | —     | —      | 32.62 |
| Depth (m)      |              | 55        | 70     | 110   | 112   | 114   | 113    | 62    |
| Secchi (m)     |              | —         | 18     | 18    | 19    | 14    | 18     | 13    |
| Color          |              | —         | —      | —     | —     | —     | —      | —     |
| Sea            |              | 1         | 1      | 1     | 1     | 1     | 1      | 1     |
| Swell          |              | 1         | 1      | 1     | 1     | 1     | 1      | 1     |
| Air Temp. (°C) |              | —         | 18.0   | 20.5  | 21.2  | 18.0  | 20.5   | —     |
| Baro. (mm)     |              | 760       | 761    | 764   | 763   | 764   | 764    | 760   |
| Wind           |              | SW. 1     | SE. 11 | E. 1  | E. 1  | E. 1  | E. 1   | E. 1  |
| Cloud          |              | 0         | Ci. 10 | Ci. 7 | Ci. 7 | As. 7 | As. 10 | 0     |
| Weather        |              | B         | C      | BC    | BC    | BC    | C      | B     |

| A       |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|
| October |        |        |        |        |        |        |
| 07      | 08     | 09     | 10     | 11     | 11'    | 12     |
| 10      | 10     | 10     | 10     | 10     | 11     | 11     |
| 1300    | 1350   | 1420   | 1455   | 1515   | 0800   | 0820   |
| 24.39   | 24.39  | 24.19  | 23.99  | 23.89  | 23.29  | 22.99  |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| 34.64   | 34.41  | 33.78  | 33.61  | 34.31  | —      | 33.93  |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| 103     | 103    | 124    | 130    | 33     | 23     | 34     |
| —       | —      | —      | —      | —      | —      | —      |
| —       | —      | —      | —      | —      | —      | —      |
| 1       | 1      | 1      | 1      | 1      | 1      | 1      |
| 1       | 1      | 1      | 1      | 1      | 1      | 1      |
| 23.0    | 24.2   | 22.5   | 23.0   | —      | 20.5   | 21.8   |
| 764     | 764    | 764    | 763    | 760    | 760    | 760    |
| ENE. 1  | ENE. 1 | ENE. 1 | NE. 1  | NE. 1  | ENE. 1 | ENE. 1 |
| As. 10  | As. 10 | As. 10 | As. 10 | As. 10 | Ac. 9  | Ac. 10 |
| C       | C      | C      | C      | C      | C      | C      |

| Line           |       | B       |        |       |       |       |       |        |       |
|----------------|-------|---------|--------|-------|-------|-------|-------|--------|-------|
| Date           |       | October |        |       |       |       |       |        |       |
| Sta. No.       |       | 01      | 02     | 03    | 04    | 05    | 06    | 07     | 08    |
| Day            |       | 11      | 11     | 11    | 11    | 11    | 11    | 12     | 12    |
| Item           | Time  | 0900    | 0955   | 1045  | 1200  | 1300  | 1730  | 1820   | 1855  |
|                | Z(m)  |         |        |       |       |       |       |        |       |
| T<br>°C        | 0     | 22.48   | 22.99  | 23.39 | 23.19 | 21.98 | 22.18 | 22.99  | 22.48 |
|                | 10    | 22.48   | 23.09  | 23.29 | 23.19 | 21.98 | —     | —      | —     |
|                | 20    | 22.28   | 23.09  | 23.29 | 23.49 | 22.08 | —     | —      | —     |
|                | 30    | 22.08   | 22.99  | 23.29 | 23.49 | 22.08 | —     | —      | —     |
|                | 50    | 21.48   | 22.79  | 22.79 | 20.38 | 17.58 | —     | —      | —     |
|                | 75    | —       | 21.98  | 19.48 | 18.18 | 15.68 | —     | —      | —     |
|                | 100   | —       | —      | 18.48 | 17.08 | —     | —     | —      | —     |
|                | Botm. | 21.48   | —      | —     | —     | 15.78 | —     | —      | —     |
| S<br>‰         | 0     | 33.35   | 33.66  | 33.36 | 33.00 | 32.41 | 33.82 | 32.84  | 33.84 |
|                | 10    | 34.20   | 33.74  | 34.16 | 34.01 | 32.88 | —     | —      | —     |
|                | 20    | 34.22   | 33.60  | 33.50 | 34.08 | 32.87 | —     | —      | —     |
|                | 30    | 34.05   | 34.28  | —     | 33.62 | 32.91 | —     | —      | —     |
|                | 50    | 34.30   | 34.14  | 34.09 | 33.49 | 32.90 | —     | —      | —     |
|                | 75    | —       | 34.17  | 33.74 | 33.98 | 33.62 | —     | —      | —     |
|                | 100   | —       | —      | 34.43 | 33.98 | —     | —     | —      | —     |
|                | Botm. | 34.28   | —      | —     | —     | 33.77 | —     | —      | —     |
| Depth (m)      |       | —       | 88     | 104   | 100   | 98    | 25    | 20     | 70    |
| Secchi (m)     |       | 11      | 15     | 19    | 19    | 16    | —     | —      | —     |
| Color          |       | —       | —      | —     | —     | —     | —     | —      | —     |
| Sea            |       | 1       | 1      | 1     | 1     | 1     | 1     | 2      | 2     |
| Swell          |       | 1       | 1      | 1     | 1     | 1     | 1     | 1      | 2     |
| Air Temp. (°C) |       | 21.4    | 21.6   | 22.0  | 23.4  | 22.3  | 21.3  | 22.8   | 22.8  |
| Baro. (mm)     |       | 760     | 760    | 762   | 765   | 765   | 760   | 764    | 763   |
| Wind           |       | NE. 1   | NE. 1  | NE. 2 | NE. 1 | NE. 1 | E. 1  | NE. 2  | NE. 4 |
| Cloud          |       | Ac. 9   | ABc. 8 | Ac. 8 | Ac. 6 | Cu. 6 | 0     | Ns. 10 | Ns. 2 |
| Weather        |       | C       | C      | B     | BC    | BC    | B     | B      | B     |

| C         |       |       |       |       |       |       |       |       |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| ① October |       |       |       |       |       |       |       |       |
| 01        | 02    | 03    | 04    | 05    | 06    | 07    | 08    | 09    |
| 17        | 17    | 17    | 17    | 17    | 18    | 18    | 18    | 18    |
| 0840      | 0917  | 1015  | 1120  | 1235  | 1020  | 1135  | 1247  | 1425  |
| 20.78     | 20.68 | 20.68 | 20.78 | 20.68 | 20.68 | 20.58 | 20.18 | 22.68 |
| 20.78     | 20.88 | 20.68 | 21.18 | 20.48 | —     | —     | —     | —     |
| 20.98     | 20.88 | 21.08 | 21.48 | 22.48 | —     | —     | —     | —     |
| 20.88     | 21.18 | 21.48 | 21.68 | 22.79 | —     | —     | —     | —     |
| —         | 21.18 | 21.08 | 20.48 | 17.58 | —     | —     | —     | —     |
| —         | 20.43 | 20.38 | 19.08 | 16.58 | —     | —     | —     | —     |
| —         | 17.98 | 19.18 | 17.58 | 15.78 | —     | —     | —     | —     |
| —         | —     | —     | —     | —     | —     | —     | —     | —     |
| 33.16     | 34.21 | 33.15 | —     | 32.18 | —     | 32.98 | 32.86 | 32.86 |
| 33.04     | 32.91 | —     | 32.72 | 32.58 | —     | —     | —     | —     |
| 33.48     | 32.73 | 34.00 | 33.38 | 32.68 | —     | —     | —     | —     |
| 33.41     | 33.09 | 32.46 | 33.21 | —     | —     | —     | —     | —     |
| —         | 32.63 | 33.50 | 33.53 | 33.57 | —     | —     | —     | —     |
| —         | 32.73 | 33.70 | 34.34 | 34.11 | —     | —     | —     | —     |
| —         | 32.94 | 33.73 | 34.40 | —     | —     | —     | —     | —     |
| —         | —     | —     | —     | —     | —     | —     | —     | —     |
| 34        | 104   | 135   | 126   | 105   | 25    | 47    | 45    | 14    |
| 9         | 19    | 11    | 13    | 17    | —     | —     | —     | —     |
| —         | —     | —     | —     | —     | —     | —     | —     | —     |
| 1         | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 1         | 1     | 1     | 1     | 2     | 1     | 1     | 1     | 1     |
| 19.2      | 19.3  | 19.4  | 19.6  | 19.5  | 19.0  | 20.7  | 20.0  | —     |
| 765       | 765   | 765   | 764   | 763   | 765   | 765   | 765   | 763   |
| 0         | 0     | W. 1  | W. 1  | W. 1  | 0     | N. 1  | NW. 1 | NW. 1 |
| 0         | Ac. 5 | Cc. 2 | Cu. 2 | Cu. 5 | 0     | 0     | Cu. 1 | Cu. 2 |
| B         | BC    | B     | BC    | BC    | B     | B     | B     | B     |



| Line           |       | D         |        |        |        |        |        |       |
|----------------|-------|-----------|--------|--------|--------|--------|--------|-------|
| Date           |       | ② October |        |        |        |        |        |       |
| Sta. No.       |       | 01'       | 01     | 02     | 03     | 04     | 05     | 06    |
| Day            |       | 19        | 19     | 19     | 19     | 19     | 19     | 20    |
| Item           | Time  | 0835      | 0902   | 0950   | 1050   | 1210   | 1315   | 0835  |
|                | Z(m)  |           |        |        |        |        |        |       |
| T<br>°C        | 0     | 20.98     | 21.68  | 23.09  | 22.99  | 23.19  | 22.89  | 21.68 |
|                | 10    | —         | 21.48  | 23.09  | 22.99  | 23.19  | 22.79  | —     |
|                | 20    | —         | 21.48  | 22.99  | 22.99  | 23.19  | 22.79  | —     |
|                | 30    | —         | 21.18  | 22.99  | 22.89  | 23.19  | 22.79  | —     |
|                | 50    | —         | 20.98  | 20.98  | 21.48  | 23.19  | 22.48  | —     |
|                | 75    | —         | 20.08  | 19.88  | 17.98  | 19.38  | 19.68  | —     |
|                | 100   | —         | —      | 15.58  | —      | —      | —      | —     |
|                | Botm. | —         | 16.08  | 15.08  | 14.88  | 14.68  | 14.88  | —     |
| S<br>‰         | 0     | —         | —      | 32.87  | 33.82  | —      | —      | —     |
|                | 10    | —         | 33.30  | 33.25  | 34.38  | —      | —      | —     |
|                | 20    | —         | 33.56  | 33.72  | —      | —      | —      | —     |
|                | 30    | —         | 33.56  | 33.42  | —      | —      | —      | —     |
|                | 50    | —         | 33.43  | 33.37  | —      | —      | —      | —     |
|                | 75    | —         | 33.22  | 33.43  | —      | —      | —      | —     |
|                | 100   | —         | —      | 33.76  | —      | —      | —      | —     |
|                | Botm. | —         | 33.42  | 34.63  | —      | —      | —      | —     |
| Depth (m)      |       | 42        | 112    | 130    | 128    | 130    | 120    | 20    |
| Secchi (m)     |       | —         | 15     | 22     | 19     | 22     | 19     | —     |
| Color          |       | —         | —      | —      | —      | —      | —      | —     |
| Sea            |       | 1         | 1      | 1      | 1      | 1      | 1      | 1     |
| Sweli          |       | 1         | 1      | 1      | 1      | 1      | 1      | 1     |
| Air Temp. (°C) |       | 17.4      | 18.0   | 19.2   | 19.5   | 23.1   | 23.0   | 17.0  |
| Baro. (mm)     |       | 764       | 764    | 765    | 765    | 765    | 765    | 765   |
| Wind           |       | W. 1      | NNW. 1 | NNE. 1 | NNE. 1 | NNE. 1 | NNE. 1 | NW. 1 |
| Cloud          |       | 0         | 0      | 0      | 0      | 0      | 0      | 0     |
| Weather        |       | B         | B      | B      | B      | B      | B      | B     |

| D         |       |       |       | C         | D       |
|-----------|-------|-------|-------|-----------|---------|
| ③ October |       |       |       | ④ October | October |
| 07        | 08    | 09    | 10    | 1         | 1       |
| 20        | 20    | 20    | 20    | 25        | 25      |
| 1010      | 1025  | 1100  | 1200  | 1420      | 0855    |
| 21.79     | 21.78 | 22.28 | 22.68 | 17.20     | 16.90   |
| —         | —     | —     | —     | 14.82     | 16.51   |
| —         | —     | —     | —     | 10.15     | 15.23   |
| —         | —     | —     | —     | 8.42      | 10.94   |
| —         | —     | —     | —     | 3.68      | 3.47    |
| —         | —     | —     | —     | 2.59      | 1.86    |
| —         | —     | —     | —     | —         | —       |
| —         | —     | —     | —     | 1.63      | 1.57    |
| —         | —     | —     | —     | —         | 33.04   |
| —         | —     | —     | —     | —         | 32.99   |
| —         | —     | —     | —     | —         | 34.28   |
| —         | —     | —     | —     | 34.09     | 34.22   |
| —         | —     | —     | —     | 33.95     | 33.92   |
| —         | —     | —     | —     | 33.94     | 33.92   |
| —         | —     | —     | —     | —         | —       |
| —         | —     | —     | —     | 33.95     | 33.10   |
| 18        | —     | —     | —     | 110       | 102     |
| —         | —     | —     | —     | —         | 95      |
| —         | —     | —     | —     | —         | —       |
| 1         | 1     | 1     | 1     | 1         | 1       |
| 1         | 1     | 0     | 1     | 1         | 1       |
| —         | 19.0  | 21.7  | —     | 18.9      | 16.8    |
| 767       | 767   | 766   | 766   | 764       | 765     |
| NW. 1     | NW. 1 | NW. 1 | NW. 1 | S. 1      | S. 1    |
| 0         | 0     | 0     | 0     | Ci. 1     | Ci. 1   |
| B         | B     | B     | B     | B         | B       |



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